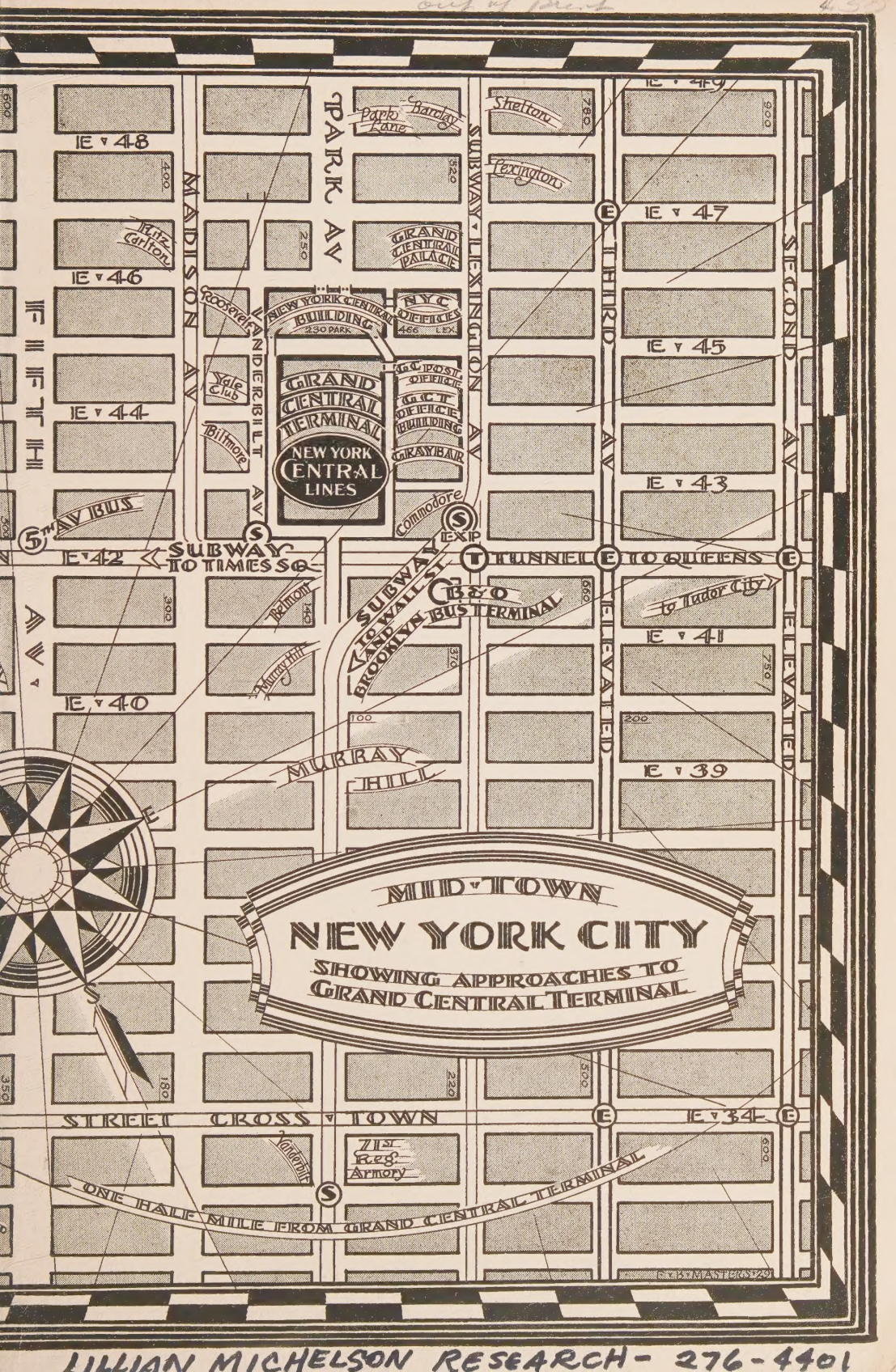
THE RUN OF THE TWENTIETH CENTURY

THEATER DISTRICT
BROADWAY
IRT TO WASHINGTON HTS
BMT TO QUEENS
SEVENTH AV
SIXTH AV
EIGHTH AV
NINTH AV
TIMES SQ
WEST SHORE FERRY
SUBWAYS
EXPRESS STAS
IRT TO GREENWICH VILLAGE, WALL ST & BROOKLYN
BMT TO BROOKLYN
BROADWAY
ELEVATED
CONSOLIDATED TICKET OFFICE
BRYANT PARK
42ND ST CROSSTO
W 48
W 47
W 46
W 45
W 44
W 43
W 42
W 40
W 34
MODES OF TRAVEL
S IRT INTERBORO SUB
B BMT BROOKLYN-MANHATTEN SUB
T EAST RIVER TUNNEL
E ELEVATED LINES
H HUDSON TUBES
S EIGHTH AV BUSES
THIRTY FOURTH
HUDSON TUBE TO NEW JERSEY
UNDERGROUND PASSAGEWAY
PENNSYLVANIA STATION
GENERAL POST OFFICE
Pennsylvania Hotel
GREELEY SQ
BMT EXP

out of print



LILLIAN MICHELSON RESEARCH - 276-4401

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THE RUN OF THE TWENTIETH CENTURY

LA SALLE STREET STATION · CHICAGO — THREE CENTURYS READY FOR THE EAST-BOUND RUN

THE RUN OF THE TWENTIETH CENTURY

BY

EDWARD HUNGERFORD

ILLUSTRATIONS BY
FRANK B. MASTERS
AND OTHERS

LILLIAN MICHELSON RESEARC
276-4401

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FOREWORD

THIS is the story of a train. Yet it already has become very much more than a single train; it now is a whole fleet of trains. For, in the autumn of 1929, the Twentieth Century Limited was expanded into a group of nine swift through expresses, each scheduled to make the run between New York and Chicago, over the lines of the New York Central Railroad, within the popular twenty-hour limit. A special section of the train—appropriately named the Advance Twentieth Century Limited—was placed upon the time tables to leave westbound at two o'clock each afternoon from New York; eastbound from Chicago at just noon. More recently this schedule has been readjusted so that the Advance Century now leaves New York at 1:45 p.m.; Chicago at 11:40 a.m. Still other twenty-hour trains were added—the Commodore Vanderbilt most notable amongst all of these—until there are now not less than nine of these twenty-hour trains making the daily run between New York and Chicago; a fleet of long-distance expresses, which for speed and regularity of operation is not equalled by any other railroad in the entire world.

So it is that the Twentieth Century becomes, instead of a single train, a symbol of many trains, but all upon a single railroad system. Its high place remains unaltered, unchanged. It still is the queen of all American railroad trains; as such it has found and retains its niche in the hearts of all regular travelers.

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THE RUN OF THE TWENTIETH CENTURY

◆ I ◆

THIS is the story of a train—one of the outstanding trains of all the world. Yet it is something much more. It aims to be a record of the operations back of that train; of the forces that work for the precision of its movement, for its comfort, for its safety, for that multitude of things that the American railroader likes to call the high development of his passenger service. For the making of swiftness—with safety—for the perfection of all those other details that guard and facilitate the operation of a really distinctive train of all creation, is no small problem of the fine, practical science of modern railroading.

The Twentieth Century Limited—now come to the twenty-eighth year of an unbroken season of continuous and successful operation—in reality, is much more than a train: It is an institution; a national institution, if you please; nowadays, as much of a national institution as the Capitol at Washington or the Hudson River, or the motor-car, or baseball. It is more, however, than an institution; it is an expression of our American life today; of its virility, of its force, of its unending demand for speed,

precision, comfort. Of all these things, the Twentieth Century Limited is an exponent. Therefore, it really does deserve to be ranked as something much more than train or institution.

There are, of course, many other swift and important trains upon the New York Central. Many of them through the years have come to a high degree of popularity. But none to quite the point of the Twentieth Century. Because of this and because its operation is so typical of the other fine fast trains of the system, it has been chosen for this telling.

Daily it takes its departure from New York for Chicago; starting from that roomy and centrally located passenger terminal in the island of Manhattan, the Grand Central Terminal. A section of the train—or rather, cars designed to be received by it at Albany—has departed two hours earlier from South Station, Boston. . . . Even earlier in the day, long before the westbound Twentieth Century is under way from the trainshed of the Grand Central Terminal, its eastbound counterpart has left the La Salle Street Station in Chicago, bound for New York. It carries sleeping-cars destined for Boston, as well as those for New York. In the early morning, these Boston cars will be detached from the main train and placed upon a swift, through express of the Boston & Albany Railroad—a Yankee train which in most details has the full equipment of the main-stem Twentieth Century—from the club-car at the front of the train to a roomy observation-platform-car at its rear.

This then is, in brief, the operation of the Twentieth Century. A daily movement, easily put down, but by no means so easily performed. Back of it rests an infinitude of

details. Literally, hundreds of machines and hundreds of men, each laboring to do his carefully assigned part to make the flight of the famous train swift and safe and comfortable. The most of these, you, as a passenger, will never see, or even hear of. They are all quiet, unobserved, hidden. But they function, faithfully and well. If they failed to function even for a few hours or a few minutes—in certain cases, for mere seconds—the Century could not accomplish its allotted daily task. It shall be the purpose of this chronicle to peep into these quiet, hidden places, see the men and the machines there at work, and to tell, in a brief and untechnical fashion, the part that each performs in the operation of the train.

THE DISTRIBUTION BOARD AT GRAND CENTRAL TERMINAL

THE TELEPHONE PLAYS A LARGE PART IN
THIS BUSINESS OF PULLMAN RESERVATIONS

◆ II ◆

YOU, a New Yorker, have decided that you must be in Chicago on the morrow. An important business engagement makes it essential that you be there in the morning; well before noon. If you cannot keep that engagement yourself, a considerable sum of money or a prestige may be lost. It is most urgent, indeed, that you be there in Chicago, promptly. And it is essential that you go to your engagement, rested and refreshed, mentally "riding in high" to a conference of real moment to you.

The Twentieth Century becomes the solution of your problem.

It is already past noon. The main Century* is due to leave at 2:45 o'clock. Never mind. The Grand Central is splendidly located, right in the very heart and center of pulsing New York. Broad avenues, ordinarily reasonably uncongested, lead right up to its many entrances. Underneath, unseen but vastly busy, are the main lines of New York's swift and dependable subway system. By it, a man may leave Wall Street as late as a quarter past two and be assured of catching his train. . . .It has been done in less time.

You begin to wonder if there will be room for you on today's Century. That perplexity is quickly relieved. There is a telephone at your elbow. To get "Vanderbilt 3200" is only a matter of seconds. . . .Yes, there is space for you. A lower berth? Yes. The Century usually operates upon a "lower berth basis." In other words, unless there is an extraordinary or unexpected rush of travel, the comfort and facility of a lower berth is at your command. The aim is to please the patron. To do this may mean the

*Not to be confused with the Advance Twentieth Century Limited, a duplicate train, which leaves at Grand Central at 1:45 o'clock each afternoon.

addition of extra cars to the day's roster of the train. Not only that, but, sometimes, the addition of extra sections—in reality extra trains. But all of this—as presently will be seen—is only but part of the ordinary day's work in the operation of the Century. So much a matter of routine has it become that it all has become well prefected and synchronized—as also will be seen.

Close to lower Broadway (to be exact, 17 John Street) there is one of the several Consolidated Ticket Offices that the railroads entering New York maintain jointly at various central points in the greater city. You can go, or send, there and secure your railroad passage ticket and your berth or accommodation through to Chicago. The Pullman fare is the unchanging regular sleeping-car charge for any train, whatsoever, between New York and Chicago. The railroad fare is the standard first-class fare between the two cities, plus an excess charge of $9.60 for the eight hours saving in time that the Century makes over the standard running-time long since established by the railroads for high-grade through passenger-trains between the two cities. In other words, this standard is fixed at a basic twenty-eight hours. The Century accomplishes the run in twenty hours—hence, the $9.60 extra added to your ticket.

Perhaps, you have elected to go around to the Consolidated Ticket Office at 17 John Street and "pick up" your own ticket. Perhaps, you have not even taken the time to telephone up to the Grand Central in the hopes of getting accommodations. Experienced traveler, that you are, you feel quite sure that the Century will hold a comfortable and roomy "lower" for you. . . .You step into the Consolidated office, go over to the New York Central

counters, and make known your wishes to one of the young men there.

"Certainly," he says, and begins speaking into a telephone.

"Yes, we can give you a lower, today," is his reply. And as you begin fumbling for your purse, he is pulling out the ticket forms and beginning to place upon them the number of your car and of your berth—making them into a completed and highly official ticket.*

Now step behind the scenes for a moment and see what is happening there as the ticket agent in the Consolidated office in lower Broadway is talking into his telephone.

Behind-the-scenes, this particular instant, is a quiet, bright, orderly big room hidden on an upper floor of the Grand Central Terminal. Officially it is designated as the Pullman Distributing Office and it serves the New York Central Lines exclusively.

At first glance, this long room with its long tables running down it, with rows of alert young women with telephone head-pieces seated at them, looks a bit like the central telephone exchange of a good-sized town. . . .On second glance one sees that it is much different. Instead of a multiplicity of jacks and tiny lights arranged in a checker-board uniformity, the tables are lined with racks. . . .All the time that the young women are talking into their phones, they are reaching into these racks, bringing tablets out from them, making notations upon the tablets

*As a matter of actual fact, there are not less than two separate tickets covering this journey of yours to Chicago—one of the special forms of railroad passage ticket, providing for the regular fare and the excess for the Century on this particular day; the other, the ticket issued for the Pullman Company, which covers the cost of your berth or room. This last, of course, also is only good for the exact day and train specified upon it.

and replacing them. . . .These tablets are kept along the center table alone. The young women, also with telephones, at the side table which runs parallel with it, turn from time to time, consult the racks, pull out the tablets, make their own notations upon them and replace them.

The entire process is swift, quiet, unending.

Now see what it all means.

Each of these tablets contains the diagrams of a single regularly-scheduled outbound sleeping-car or parlor-car on the New York Central for the next thirty days to come —arranged sequentially. In parallel double columns printed on each diagram are the numbers or the letters that designate the individual berths (upper or lower), compartments, drawing-rooms or parlor-car seats. Opposite these are various numbers or names that have been written upon the cards for some days past. If these are numerals they are the serial numbers of tickets already issued and paid for, representing these precise spaces. The names are those of persons for whom they have been reserved, pending a final purchase.

Now see how the thing works:

There are six sections of the long center table; each numbered, and each seating, in busy hours, four girls. The young man who is selling the tickets has a list of the through trains of the road; opposite the number of each is the number of a section of the diagram board. These last agree with the numbers on six small buttons in front of him.

The Century patron rides on Train "25." (That is its official train number on the timetable.) The reservation cards of No. "25" are kept in section 2 of the diagram table. When a request is made for Pullman reservations on the Century, therefore, the ticket-seller presses down the button marked "2" and a moment later he is talking with the reservation girl in the Grand Central. There is nothing

stilted or artificial about their talk. Nothing extended. It follows a definite formula. After this fashion:

Ticket Seller—"Twenty-five . . . Chicago . . . Thursday, October 12. . . Lower."

Pullman Clerk, (at the distributing board): "All right."

The ticket seller looks at the serial number printed upon the small red ticket that he has pulled out of his rack, reads it into the telephone. It is 1776.

Ticket Seller: "One, Seven, Seven, Six."

Pullman Clerk: "Lower Twelve, Car Forty-two, Twenty-five, Chicago. Thursday, October 12. . . .One, Seven, Seven, Six."

Ticket Seller (repeats) "Lower Twelve, Car Forty-two, Twenty-five, Chicago, Thursday, October 12. . .One, Seven, Seven, Six."

As this is being repeated over the telephone, the Pullman clerk checks with her pencil this data on the diagram card. She has written "1776" opposite the number 12 on the lower berth column on the card, which is headed, "Train '25,' New York to Chicago, Thursday, October 12, 19—." This berth is now sold. Unless a definite cancellation of the sale comes through to the distributing board nothing else can upset it. There can be for this particular car on this particular train on this particular day no other diagram card. . . .In other days it was different. Various selling agencies in various parts of the town had individual cards for the same car on the same day—certain space in each car being allotted to each selling agency—and, frequently, it would come to pass that the car was reported "sold out" in one place when there was plenty of space available at other agencies. Of course, this could be rectified to an extent by use of the telephone, but time was lost and, frequently, there was confusion. And not infrequently the same berth in the same car on the same night would be sold to two entirely different persons,

causing very much confusion indeed. . . .The new method has resulted in tremendous time savings and the old evil of "double selling" has practically been eliminated—all by the establishment of this central distributing board or clearing house.

Four clerks at a single section, handling a single train would seem to give abundant opportunity for instant service—in the first installation of the distributing board system but one clerk handled a train and there was occasional delay—but there is still further leeway to the arrangement. If the ticket seller gets nothing but the "busy" buzz in response to Number Two, he has alternatives. He may call either One or Three. The girls at these positions will reach over and get the diagram cards from "Twenty-five's" compartments. Ordinarily, it does not very much matter just what sleeper a passenger rides within; the essential thing in a train whose constant pride is that any one section or any one car is just as good as any other section or any other car is that he gets the particular sort of space that he desired and requests.

These diagram cards in the racks of the distributing table are, as has just been said, placed there for the ensuing thirty days. Yet this does not represent the limit of advance reservation. In another rack in a far corner of the room are yellow diagram cards for every regularly scheduled sleeping-car that is to depart out of the Grand Central for an additional three months to come. Beyond that time and for any time up to two years advance reservations for any space on any train will be received and recorded in a book—to be filled four months advance of the departure of the train, as its diagrams come into existence.

The light yellowish cards represent the regular cars. As business demands—and as will presently be seen, very frequently upon the Century—extra sleeping-cars must be added to the train. For each of these last a special designating number is given and its diagram is begun upon a distinctive pinkish card. The color designates, at a glance, the extra cars. . . .Sometimes these extra sleepers are arranged far in advance. The men in charge of the distributing easily foresee when they will be needed. Certain holidays—notably Christmas, Fourth-of-July and Labor Day—are foreshadowed by large demands for extra space —and extra cars—while huge events, more or less regularly upon the calendar, such as football games, the larger horse shows, automobile shows and the like also make sizable demands annually, which generally can be anticipated. . . .The men in charge of the distributing board become adept in foreseeing these things. Foreseeing they also are forehanded. And long in advance of the last minute they are obtaining their authority for ordering these cars into service and warning the Pullman Company to have the necessary cars at New York ready for the outgoing movement. . . .Of course, there will come times—many of them—when the unexpected comes quickly to pass and extra cars must be found and put into service but these times are not so usual. As a rule, uprushes of traffic can be and are anticipated and plenty of provision made for them.

A serious and never ending problem of the distributing board is that of cancellations of sleeping-car space.

The American public has educated itself to a belief that its sleeping-car system is so flexible and so easily adjustable that a series of last-minute cancellations is no upset

whatsoever. This is unfortunate. In no other nation may the traveler play as fast and loose with the existing scheme of things. In no other nation does he do it. Forty-eight hours before the departure of the train is the minimum time for sleeping-car cancellation in Continental Europe and in many cases even this is based upon the railroad's ability to resell the space. Here it is different. Here it is, that a traveler may on a pinch walk into a railroad's selling agency, and say that he has had to change his mind and, if he has already bought his tickets, toss them down and have his money back for them, to the last penny. . . .If he cannot reach the selling agency, he can do the thing by telephone. In either case the diagram is brought out, the name or Pullman ticket number erased from the space in question and it is available for sale again—if a last-minute passenger turns up. If he does not, both the railroad and the Pullman Company are out of luck.

The telephone plays a large part, indeed, in this great business of Pullman reservations and sales.

Not merely in the case of the latter forming, as has just been seen, the direct and instant connection between the ticket seller, who, probably, is having personal contact with the patron and the distributing board; but also, for reservations, for phone calls direct into the board. Its outside number, Vanderbilt 3200, is a familiar one in the ken of New York business executives. . . .The man who calls it has instant touch with the New York Central Pullman distributing board. In a matter of brief seconds he is talking at one of the ten or a dozen stations down the long side table that runs parallel to the long main diagram table down the center of the room.

The telephone switchboard stands at the end of the place. The expert operators who sit at it command through mirrors a good view of the entire room. Between these and their knowledge through their board of the stations that are "busy" they can quickly and properly place the incoming calls. . . .Many calls come not through the Grand Central, the Consolidated offices or any other of the direct selling agencies of New York Central, but straight into "Vanderbilt 3200."

Trace one of these.

"A drawing-room on the Century, tomorrow evening, please. I should like it in an all-room car."

The switchboard girl takes a quick glance at the situation. Three of the four young women at Section Two—where the Century's diagrams are kept—are busy. Two of the young women nearest them at the side table also are busy. A third, just beyond, is free. She gets the incoming call.

"Just a moment, please," she says.

Then arises, goes to the diagram board and picks the tablet holding the card of one of the all-compartment and drawing-room cars. It is a pink card, which shows that it is an added, or extra car. That makes no difference. . . Room F is empty.

"Name, please," says the girl at the station. . . .It comes into her and she writes it upon the card, in the still blank space, opposite the designation "Room F." . . . Into the telephone she repeats, for confirmation and accuracy, the details of the reservation.

"Will you be good enough to call for it before ten tomorrow morning?" she requests and makes a notation "10 a.m." upon the card. . . .The transaction is closed.

To these young women at the side tables come not merely the local calls requesting Pullman reservations but the long-distance ones as well; sometimes from a considerable distance indeed. And the mail and the telegraphic requests. Many more of the last than of the former. . . . Telegrams are answered instantly. The rule of the office is that no telegram must be put down until it is answered, either giving the exact space reserved or—in very rare cases—that no space is available or, at least, not the particular sort of sleeping-car space that has been requested. . . .Each half-hour a messenger-boy is despatched to the telegraph office. Instant service is the rule behind these scenes.

Other telephones still give direct connection to the stations along the Hudson Division—most prolific in their requests for through-train reservations—there are facilities also for sending out telegrams to other and connecting railroads to secure requested space upon their trains. . . . No detail is omitted. And a careful record is kept of all the infinite detail. Reservation diagrams are held for a year after the departure of the trains that they represent. (For the actual use of the Pullman conductors, exact transcripts of these are made just before the departure hour and sent by messenger to the train, at just the final moment) . . . Careful copies are also kept of each letter or telegram sent in response to mail or telegraphic requests. And a record, by name, of all space cancellations. Nothing is left to chance. Nothing can be left to chance. That is not the way that a well ordered railroad is run.

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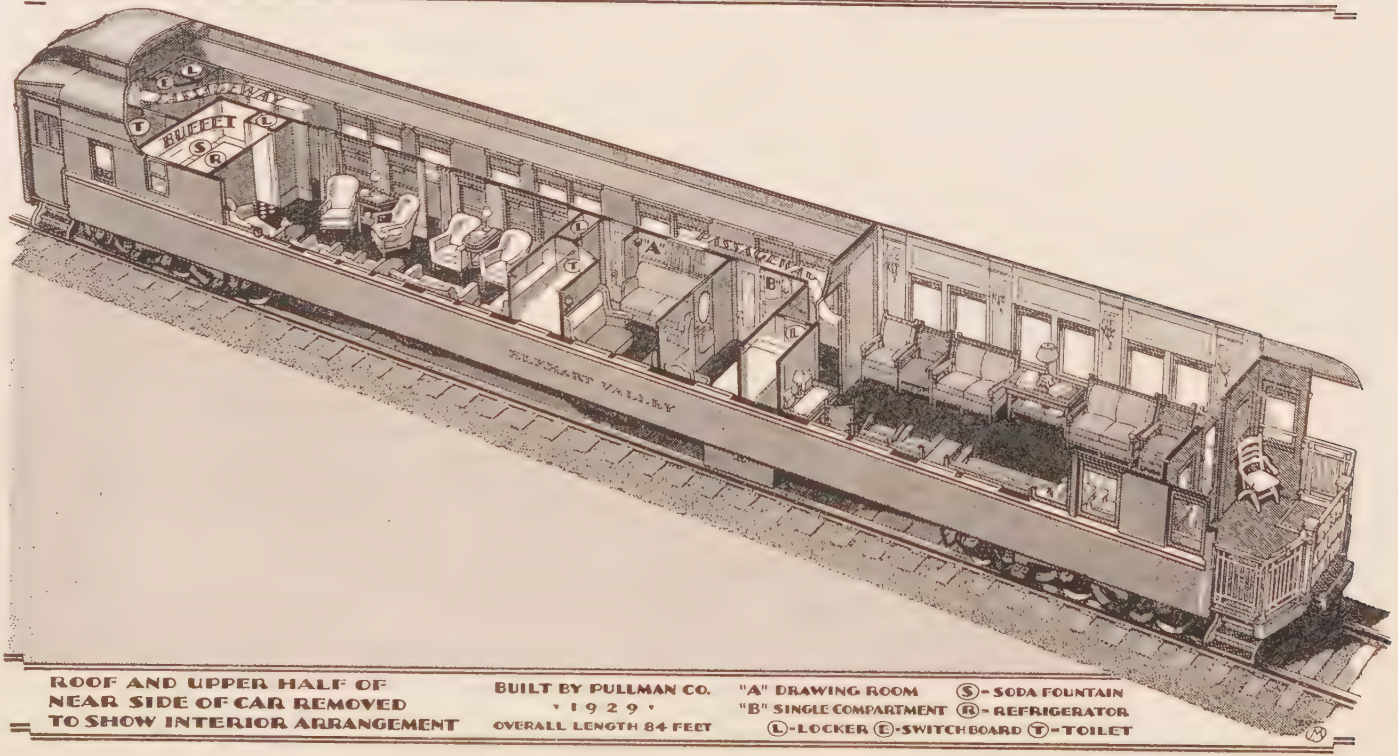
◆ III ◆

NOW come to the beginnings of the actual operation of the Twentieth Century Limited, day in and day out:

Here is the central mind in which the operation of this day's Century is planned—and carefully planned: It is the office of the manager of passenger transportation of the New York Central Lines and it stands as a very vital link between the traffic organization of the railroad—whose business it is to find the passengers for the train and to sell them the tickets—and the operating organization—whose equally important business it is to transport those passengers and their belongings over the line.

So it is that the traffic department in the early morning reports to the manager of passenger transportation just what facilities the Century must furnish this day—how many upper or lower berths, how many compartments, how many drawing-rooms. The manager of passenger transportation's job is to translate that demand into a given number of sleeping-cars, of varying types. There must be in the average section of the Century at least one sleeping-car which is divided exclusively into rooms—of both the compartment and the drawing-room types—together with an indefinite number of cars into which a varying number of compartments and drawing-rooms are introduced into a so-called "standard" car, in which the open sections of upper and lower berths are the predominating features. And, in the latter-day Century, there is sure to be at least one car with nothing but upper and lower berths—the new 14-section cars, which, because of their great popularity with many men traveling alone, have come to be called, informally, at least, "stag" cars.

AERIAL PERSPECTIVE DRAWING OF COMPARTMENT - LOUNGE - OBSERVATION CAR



ROOF AND UPPER HALF OF NEAR SIDE OF CAR REMOVED TO SHOW INTERIOR ARRANGEMENT

BUILT BY PULLMAN CO.
• 1929 •
OVERALL LENGTH 84 FEET

"A" DRAWING ROOM
"B" SINGLE COMPARTMENT
(S) - SODA FOUNTAIN
(R) - REFRIGERATOR
(L) - LOCKER (E) - SWITCH BOARD (T) - TOILET

The standard make-up of the Century—"consist" is the word that the railroaders like to use to describe it—is about as follows; just behind the locomotive, a postal-car of the Unuted States Railway Mail Service, carrying letters that have been especially addressed "via Twentieth Century Limited"; a club-car, with a baggage-compartment forward, a barber-shop and bath and a generous lounge, where soft drinks and cigars and cigarettes are both sold and consumed; eight Pullman sleeping-cars, of various types and arrangements; a dining-car (always, in a well-filled Century, two dining-cars, placed adjacent to one another) and the observation car at the rear—this last with a drawing-room connecting with the highly modern single bedroom, with a permanent bed placed crosswise in the car, and a large general lounge, in addition to one reserved for the use of both women and men passengers. And, of course—a very real luxury feature of the car—the roomy observation platform at its rear end.

This, then, is the skeleton "consist" of the Century—twelve cars all told, in addition to the locomotive. But this skeleton "consist" sometimes is exceeded. Fourteen cars almost always is the maximum length of a single Century today. Which means that two more sleeping-cars (or one extra sleeping-car and a dining-car) may be added to this standard arrangement; and so a considerable number of more guests accommodated upon the train. These extra cars are frequently added. Yet this is but the beginning. . . . .The old-timers around the Grand Central can just remember the days when a single Century—even of a dozen cars—was able to handle a single day's business bound in either direction between New York and Chicago. . . . Two Centurys each day in each direction, first the exception, long since became the rule. . . . And then three sections—in all save seasons of dullest travel. Frequently four. Not rarely five. Even six. And upon

certain memorable days, even seven sections of this train moving in a single day in a single direction across the country.*

The railroaders always speak of these separate Centurys as sections—"First 25, Second 25, Third 25," etc., using the numeral designation of the train upon the official time-tables. But only among themselves. . . To the outside world the Twentieth Century Limited is never designated in sections. If you will go into the Grand Central Terminal any day at half past two, when the train is preparing for her daily flight across to Chicago, you will find two or more of the parallel platform tracks holding the several Centurys, all of them about to make a simultaneous departure. But no one ever speaks of these as "sections." They are merely Centurys. The announcement boards at the platform entrances, which bear the numbers of the various Pullmans that make up these separate, but immensely similar, trains, make no distinction between them. For there really is no distinction. Just as much alike as two peas . . . or three peas . . . or four peas . . . whichever way you want to put it. Few around the trains—save the conductors and the engineers and certain veteran travelers, and they are not telling—know which of them will pull out first and which will pull out last.

There is no particular reason why anyone should know. For all, in effect, depart at the same time and all—barring the unforeseen—arrive at their destination at the same scheduled arrival hour; or a little ahead of it. The "consist" of each of these is generally like its fellows. And so the personnel. And so the service. "As alike as . . . peas

*A striking exception to this statement are Christmas Day and Thanksgiving each year when through travel comes to an absolute minimum and only one section is necessary for the Twentieth Century. Which permits many more of the railroaders to spend those important holidays with their families.

in a pod!" That does not half tell the similarity of these twin and triplet and quadruplet trains.

The manager of passenger transportation knows them in their individual sections, however. He knows that, today, "First 25" has two of the "room-cars" (all compartments and drawing-rooms), "Second 25" another two, and "Third 25" three. On the other hand, "Second 25" has one more of the 14-section standard sleepers than either of its fellows. There is elasticity in the consist of the combined train, to accommodate the whims and desires of its patrons on any given days. Today, there is more of a demand for open berths in the standard cars; tomorrow, there arises a rush for "rooms." The railroaders, with all of their experience, cannot always analyze the reasons for these varying tastes. But that makes no difference. Their job is to give the Century patron the thing that he desires. Even though that may mean the addition of another sleeping-car to the squadron already Chicago-bound. A sleeping-car added at comparatively the last minute—say two hours before the train is scheduled to depart. That is the way we do these things in America. They do not do them that way in many other sections of the world.

The manager of passenger transportation, early this morning, received the sales report from the traffic department for this day's Century. And then he prepared to cut his cloth to meet it. Twenty-five carloads of sleeping-car space have been sold for this night's run across to Chicago—twenty-five car-loads divided into assorted groups of draw-

ing-rooms and compartments and lower berths—probably, a few upper berths, as well.

Twenty-five sleeping-cars upon the Century tonight. Out of New York. Four carloads more out of Boston; to be added at the Albany station.

The M. of P. T. slowly scratched his head. His assistant came to him. Together they made out the consist of today's trains. "First 25" today will comprise a club-car, four sleeping-cars, one dining-car, three more sleeping-cars, and an observation-car; in the order named. "Second 25" consists of a club-car, four sleeping-cars, a dining-car, four sleeping-cars and an observation-car, again in the order named. "Third 25" has as its consist out of New York a postal-car, a club-car, four sleeping-cars, a dining-car and an observation-car.

It will be noticed that, with all their similarity, there is some little variation between these three Centurys this day. Each has the club-car, the observation-car and the dining-car, that supply those features of the train's service, big and little, that long since made it one of the most talked-of trains in all the world. Beyond that, they are different; ever and ever so slightly. The third section, alone, has the postal-car. It is this third section that will make the various scheduled stops at the larger cities across the state of New York to pick up passengers (and mail) Chicago bound, while, as will be seen in due time, the earlier sections often miss some of these intermediate stops. A modern steel car of the railway mail service is a capacious thing. And inasmuch as the Century carries letter-mail only, it is hard, indeed, to fill it to overflowing.

"Third 25" is a slightly shorter train than either of its two companions. Instead of having eight or nine sleeping-cars in its consist, it has but five. There is, of course, a good reason for this. It is "Third 25" which will receive at Albany those four sleeping-cars that are to come out of

Boston today. After which it, too, will be a reasonably sized Century. If not one of maximum size.

There is no rule that *compels* a Century to be upbuilded to that full maximum length. That is wise. For there will come days when the M. of P. T. scratches his head harder than ever before. There are telegrams upon his desk and they are most disquieting. It is winter and hard weather lays upon the northeastern corner of this land. These messages tell of fierce winds, and bitter cold, and deep snows. . . . It is no child's play running the Century on nights such as these, and keeping her proudly to her schedule. Not child's play running the Century at any time. But the problem is vastly multiplied when the bitterness of winter grips the long and tenuous body of the railroad.

Then it is that the M. of P. T. acts—and acts quickly. Obviously, it is far, far easier to drive a reasonably short train through bad weather than an unreasonably long one. The M. of P. T. cuts his cloth this time, for fair. The Ceutury becomes a succession of shorter trains. Perhaps four or five of them; all of them together hauling fewer passengers than three fairly modest Centurys would carry in pleasant weather. . . . And this means far more than any mere reassortment of the consist or normal-length Centurys into five short-length ones.

For the rule, that Century service is forever Century service and that one Century always must be equally as good as any other Century is not abandoned, even in the teeth of a blizzard. Five sections instead of three and no more—probably less—passengers being handled, means all the way from New York to Chicago, five locomotives instead of three; five club-cars, instead of three, five observation cars instead of three. . . . And so on, down the line. . . . But the Century kept to her running time; the quality of the service maintained.

There are not, of course, many days in the year when drastic steps, such as these, must be taken. For the most part the Century runs a more normal existence. . . . But one of the things in the running of a railroad is the meeting of emergencies whenever and wherever they arrive. The Century is by no means an exception to this rule. The record of its long history shows many and many a day when the train has been delayed, sorely.

The manager of passenger transportation having planned the Century for the day—reserving always the right to add cars, even a whole section to the train, if need be—turns to his chief clerk and begins the despatching of the detailed consist of all the sections of the train to the manager of the Grand Central Terminal. After which, he picks up the receiver of the telephone, which is standing upon his desk, and begins talking over the railroad's private wire to Chicago, 960 long miles away.

. . . The eastbound Century, today, also runs in three sections. There are also twenty-five Pullman sleeping-cars in the three New York-bound sections, and their division and classification is also a matter of carefully made consists. . . . The clear voice over the wire gives the necessary details of all of these. . . . Even more. . . . There are 122 New York passengers on the first section, 109 on the second and 72 on the third; all in addition to 33 persons Boston bound. The weather is clear and the incoming Centurys are all on time. . . . A few other brief details and the phone is hung up again.

The manager of the Grand Central Terminal, (his other official title is superintendent of the electric division, New York Central Railroad), has his office in an adjoining building, close to the tracks. . . . His is a hydra-headed job. As terminal manager, he is not only an officer of the New York Central, but also of the New York, New Haven and Hartford Railroad; which shares the occupancy of the terminal. Also his is no sinecure of a job. Five hundred trains to be moved out of the terminal in about nineteen hours of a normal day and sometimes, on an abnormal one, as many as eight hundred and fifty trains. . . . A station and its appurtenances finished but ten or twelve years ago and supposed to be ample for the needs of its two railroads for at least a half a century to come, already, is well pressed by the increasing demands upon it. Particularly, at the rush hours, morning and night, when a human tide of a hundred thousand folk ebbs and flows through the terminal. The management of such a property is, indeed, no sinecure.

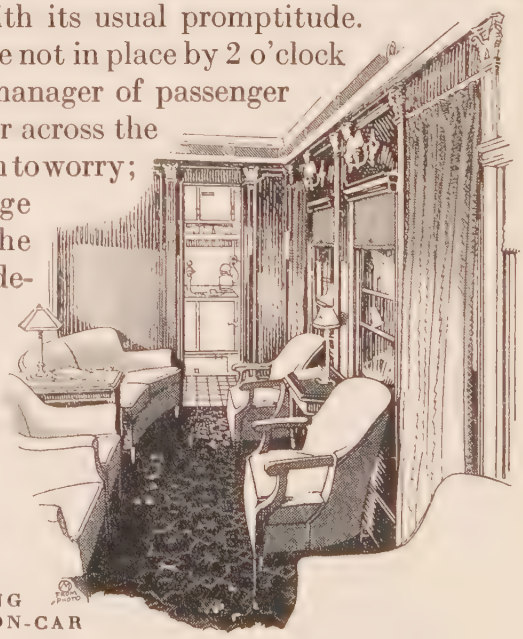
The superintendent of the terminal—the manager's assistant—digests the consist of the train, then, through his assistant, transmits it to the men who are actually to make it up. An ingenious mechanical device, known as the teletype, performs the actual work of transmission. It is an ingenious combination of telegraph instrument and typewriter. The clerk in the office of the assistant superintendent seats himself before the keyboard of the typewriter and begins typing, in tabular form, the consist of the three Centurys. He not only puts down the number and the sequence of the cars in each section, but he gives each car the numeral designation that the ticket-selling organization has used in selling the space in them; that and the precise arrangement of each of the cars—so many sections, so many drawing-rooms, so many compartments.

No less than fourteen persons receive copies of this

daily order (which, incidentally, is the same form as is used for the other important outgoing passenger-trains of the day). Among these are the general yardmaster, the foreman of the New York Central car department and the foreman of the Grand Central Terminal car department—all of these up at the Mott Haven terminal yards—the trainmaster, the stationmaster, the baggage agent, the engine despatcher, the local superintendent of the Pullman Company, the despatcher of the train-crews. . . . Every man of these is held personally responsible for the prompt despatching of the train and so plays an important role in its daily operation. . . . The receipt of these instructions at Mott Haven, the most important point in the beginning operations of the day's Century, is acknowledged back, right on the teletype. The other officers also make some form of acknowledgment.

The terminal superintendent and his assistant light their cigars and begin to pray that Mott Haven will put the train into its position with its usual promptitude. If all the sections are not in place by 2 o'clock at the latest, the manager of passenger transportation, over across the street, is apt to begin to worry; to fire short-range questions over the telephone. In the departure of the Century each day, alibis are of little use.

◆ ◆ ◆



BUFFET AND SMOKING LOUNGE—OBSERVATION-CAR

◆ IV ◆

MOTT HAVEN.

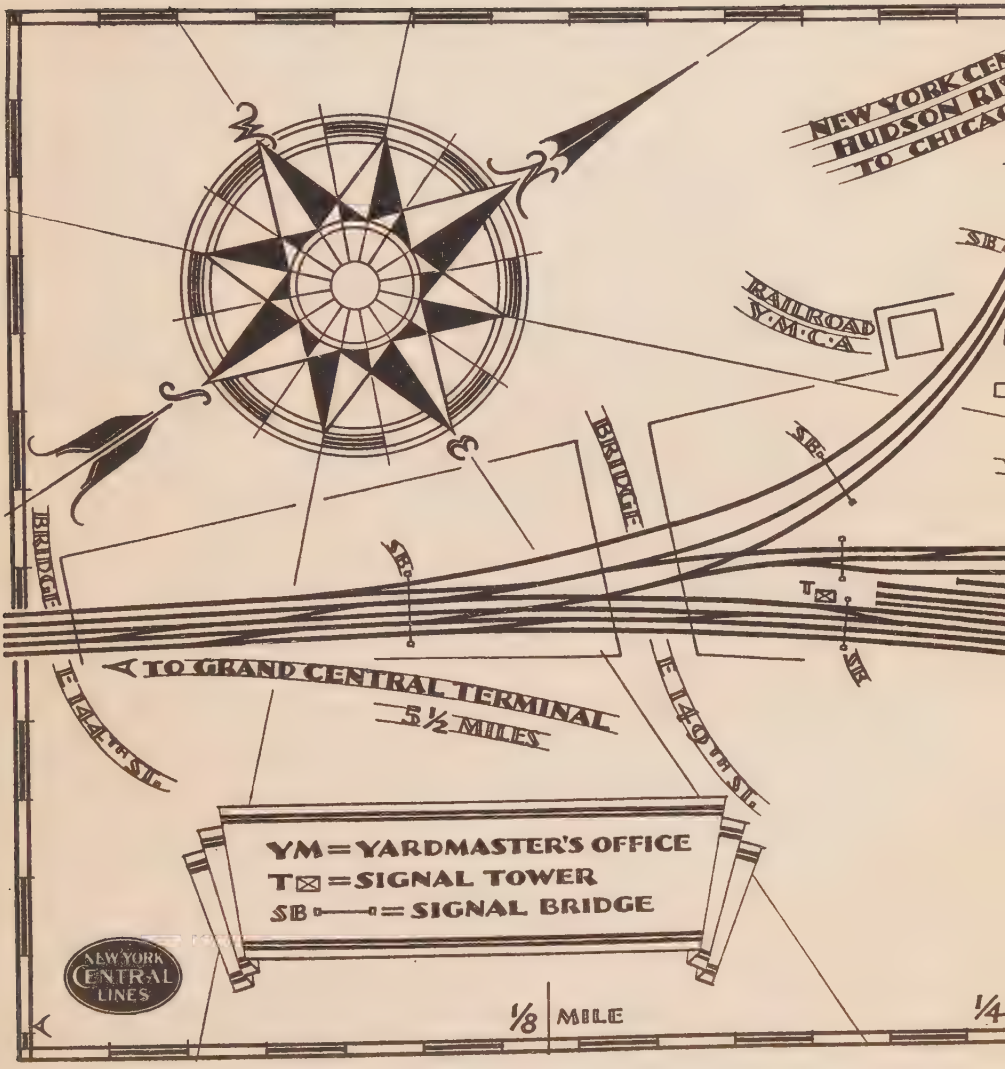
Five miles north of the Grand Central Terminal, itself, is this storage-yard, an outstanding feature of the New York Central's passenger operation in the city of New York. It is not magnificently showy, like the station. Indeed, the reverse. Mott Haven is an outgrowth of conditions—through many past years. When it originally was planned, the first Grand Central Depot was still in use and Mott Haven was a gentle suburban village with a few houses, surrounded by open lots and truck farms. That was nearly sixty years ago. Today, all is changed. . . . Mott Haven still is the principal storage-yard for the Grand Central but its surroundings have undergone transformation. The windows of tall apartment-houses look right down upon the roofs of the coaches that have come in from Chicago and Boston and Montreal and that are resting for a few brief hours before setting out upon their travels once again. . . . Literally, there is not a foot of land to spare. Just at this moment the yard is being enlarged, radically. New tracks—with a total accommodation of 118 standard passenger-cars or sleepers—and new terminal facility buildings are being constructed—at no inconsiderable cost. After which, the yardmasters at Mott Haven will have a breathing spell—for a few brief years to come. And then, the eternally increasing business of the Grand Central Terminal will have crept up and engulfed the added facilities. So that again the engineers will have to be planning further relief. That is ever the way of a railroad. Forever it refuses to remain put. Forever it is in process of growth.

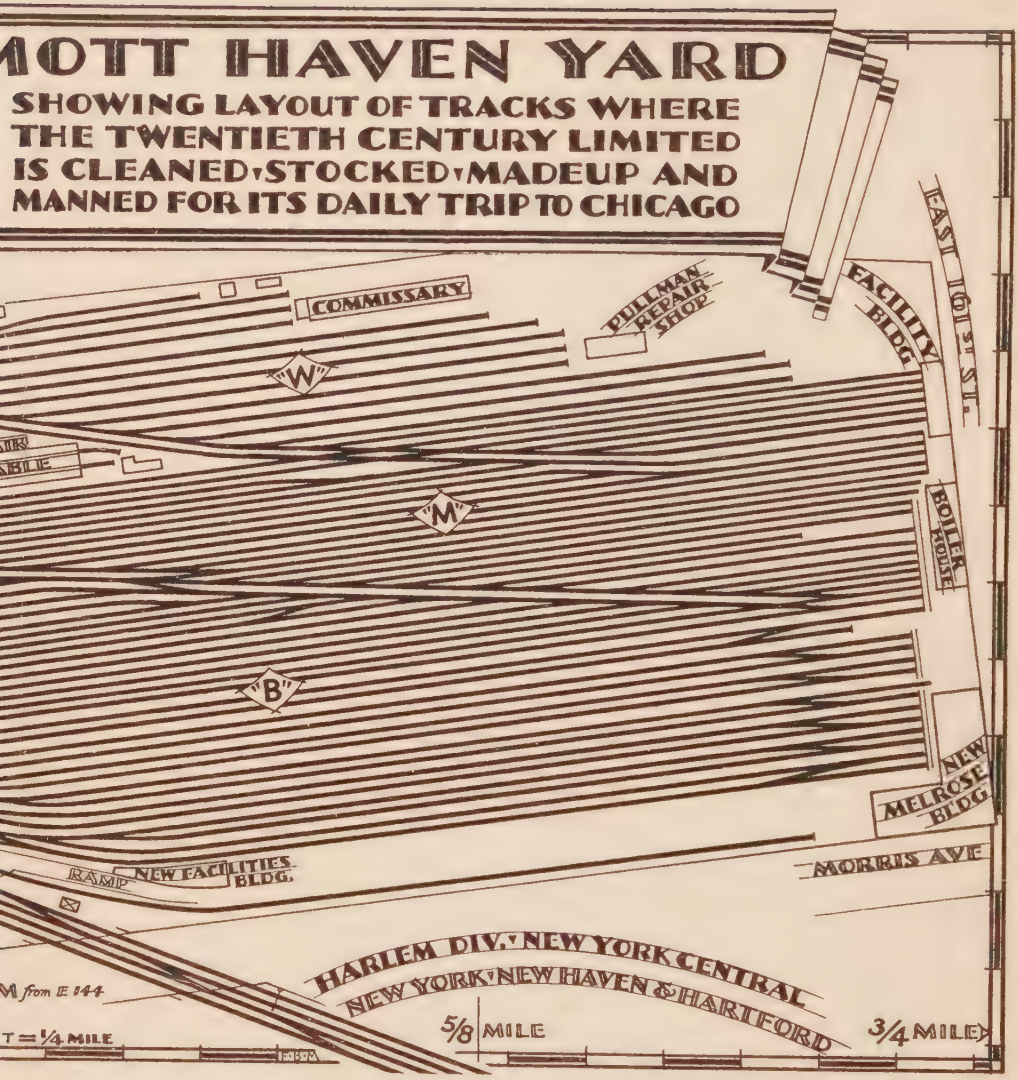
Each day of the year, Mott Haven yard is the birthplace of a new Century.

Pending the completion of the new facilities, the general yardmaster's office is, where it has been for many years past, situate in an ancient day-coach, come to its last resting-place in the very heart of the yard. (The heart of the yard is a curiously complex place whose "lead tracks" enter into it from the main lines of the New York Central and the New Haven, which branch apart from each other at Mott Haven. The complexity of the place is not decreased by the fact that these two parallel lead tracks at the gateway of the yard cross, at almost a right angle, the busy curving ones that connect the main-stems of the Hudson and the Harlem lines of the Central and so complete the "Y" and afford—under ordinary conditions—the quickest and most facile way of turnng an entire train. Only, as will be seen, ordinary conditions do not prevail at Mott Haven during many hours of the working day. And so, many times, the crossing of the connecting and the lead tracks—in Mott Haven vernacular the "gridiron"—is the very heart, not only of the yard but of its congestion.)

In the tiny office of the general yardmaster at Mott Haven is a duplicate of that teletype that we saw in the office of the assistant superintendent of the terminal, far to the south. The two machines are electrically connected and, as the young man down in the station is typing the consist of the Century, the keys of the machine in the old day-coach-office are tapping, in consonance. Under the pressure of unseen fingers. And from the platen of the machine at Mott Haven comes typewritten copy, precisely the same as is coming at the same movement from the twin machine down in the terminal.

Four typewritten copies in fact. One for each of the shop offices hard by jowl with that of the general yard-


NEW YORK CE
HUDSON RI
TO CHICA
RAILROAD
Y.M.C.A
BRIDGE
BRIDGE
SB
SB
SB
T⊠
TO GRAND CENTRAL TERMINAL
5½ MILES
E. 144TH ST.
E. 140TH ST.
YM = YARDMASTER'S OFFICE
T⊠ = SIGNAL TOWER
SB ▫——▫ = SIGNAL BRIDGE
NEW YORK CENTRAL LINES
⅛ MILE
¼


MOTT HAVEN YARD
SHOWING LAYOUT OF TRACKS WHERE THE TWENTIETH CENTURY LIMITED IS CLEANED, STOCKED, MADEUP AND MANNED FOR ITS DAILY TRIP TO CHICAGO
COMMISSARY
PULLMAN REPAIR SHOP
FACILITY BLDG.
EAST 161 ST.
"W"
"M"
"B"
BOILER HOUSE
NEW MELROSE BLDG.
RAMP
NEW FACILITIES BLDG.
MORRIS AVE.
HARLEM DIV. NEW YORK CENTRAL
NEW YORK, NEW HAVEN & HARTFORD
5/8 MILE
3/4 MILE
T = 1/4 MILE

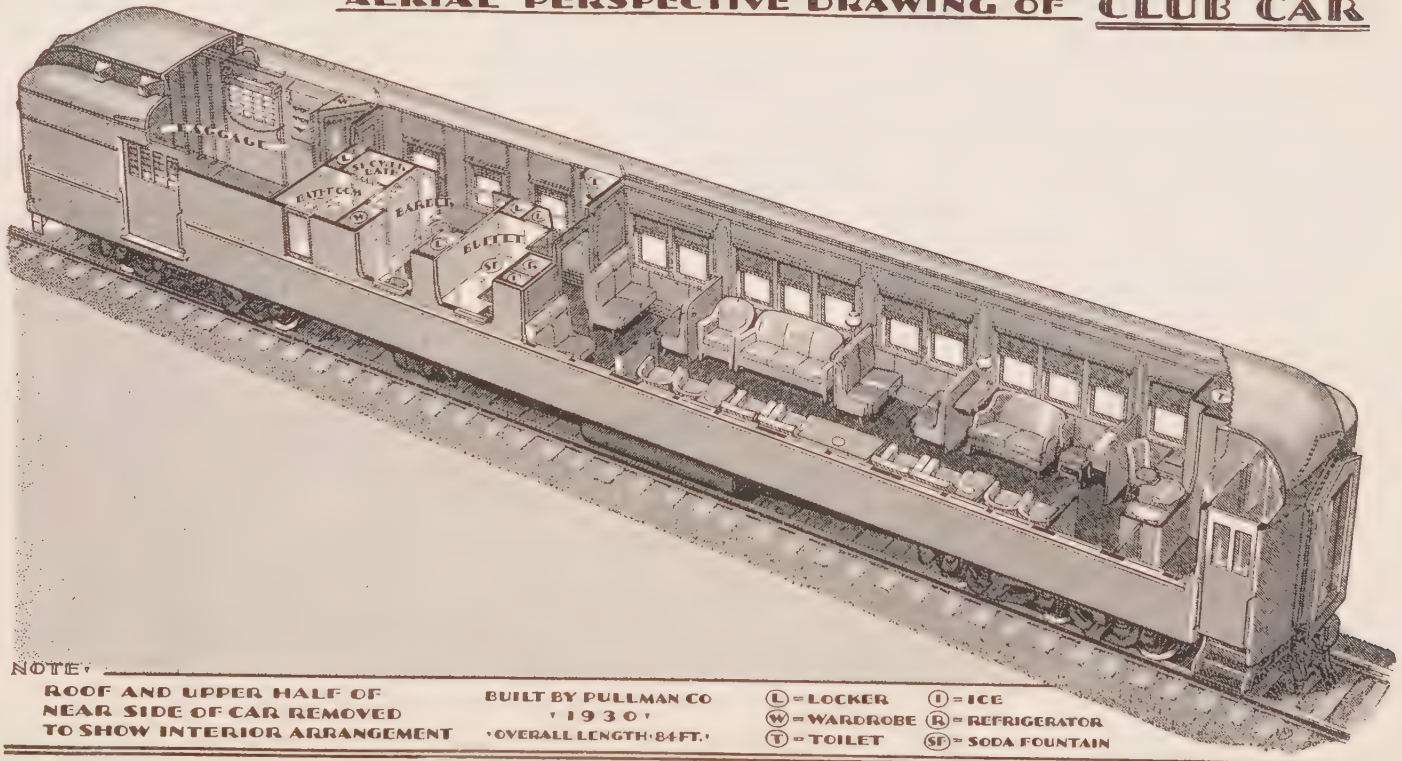
master. He sees to it that the foremen of the nearby shops get their carbons, with the least possible delay. It is essential that they, too, know the details of today's Century. That they understand them, thoroughly. . . . Each day of the year, the departure of the train is treated as a fresh event. Of no little magnitude. Each day New York Central organization, almost always good, rises to a high point in its preparation for the start of the train.

The general yardmaster studies the consist of the three sections carefully. Then, in his head, he begins planning the precise cars that are going into each of the trains. Some real thinking is required.

His head is a map. His head is a catalogue. Each year or so the Pullman Company issues a printed catalogue of all its cars—a fine, fat book, not unlike the telephone directory of a considerable city. This gives not only the names, but the arrangement and the outstanding details of the seven thousand Pullman cars. Yet almost before the book is off the press, it is out-of-date. And frequent supplements, carrying the names of cars added to the fleet, or withdrawn from it, have to keep coming from the Pullman general offices.

The general yardmaster needs neither catalogues nor supplements. Twenty-four years of hard experience here at Mott Haven have helped make him a walking catalogue of all this equipment. From quick memory he can tell you, almost instantly, which of the *Glen* cars have the walnut finish, and which have the mahogany. There are more than eighty of these *Glens*—of the one sort or the other—and inasmuch as the present fancy of the Century is for cars with a walnut finish in their interiors, the yardmaster must be careful which cars he picks.

AERIAL PERSPECTIVE DRAWING OF CLUB CAR



NOTE:
ROOF AND UPPER HALF OF NEAR SIDE OF CAR REMOVED TO SHOW INTERIOR ARRANGEMENT

BUILT BY PULLMAN CO
'1930'
'OVERALL LENGTH '84 FT.'

(L) = LOCKER (I) = ICE
(W) = WARDROBE (R) = REFRIGERATOR
(T) = TOILET (SF) = SODA FOUNTAIN

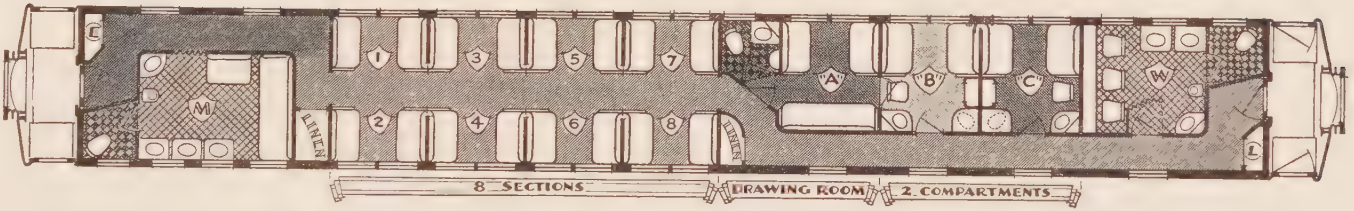
The *Centrals* are much easier. The *Centrals* are made exclusively for service in the Century or its companion train (in St. Louis service) the Southwestern Limited. The *Glens*—all-stateroom cars, each with six compartments and three drawing-rooms—are in use in a few highly selected trains across the country, but the *Centrals* —club-cars and observation-cars—do not often stray off the lines of the New York Central.

It will be understood, of course, that *Glens* and *Centrals* are parts of the systematic new nomenclature of the Pullman fleet. There existed at one time a tradition to the effect that one of the late George M. Pullman's daughters named his cars, receiving a crisp $100 note for each new cognomen added. If ever this was a fact, it has not been true for many years past. Today, the cars are named in series; for instance, the famous *East* group of standard 12-section-drawing-room sleepers; the *East Albany*, the *East Rochester*, the *East Grove*, etc., etc. Through this new plan, infinitely small places these days come to a fresh distinction. Similarly the *Central* group embraces *Central Mills*, *Central Park* and the like. Just as the so-called "stag" 14-section sleepers are *Stars*, *Starlight*, *Starbright*, *Starucca*.

The newest type of all is the *Valley* type, beginning with the *Maumee Valley*—wonderfully handsome observation-cars, with drawing-rooms, connected in suite with single bedrooms. It is not necessary that the key letters of the name be embraced in a separate word. Some of the finest new standard sleeping-cars of the Century are the *Centalpina*, the *Centralia*, the *Centurion*. . . . The first four letters of the name give sufficient designation to the yardmasters.

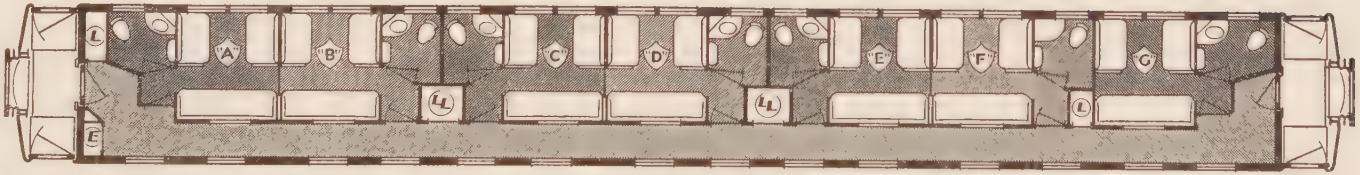
The general yardmaster has all of this—and more. He not only has the walnut *Glens* separated in his mind from the mahogany *Glens*, but also the *Glens* where the com-

SKETCH PLAN OF PULLMAN SLEEPING CAR—TWENTIETH CENTURY



1 DRAWING ROOM — "A"
2 COMPARTMENTS — "B"-"C"
8 SECTIONS — 1-8 INC.

SKETCH PLAN OF PULLMAN 7-DRAWING ROOM CAR



7 DRAWING ROOMS — "A"-"G" INC

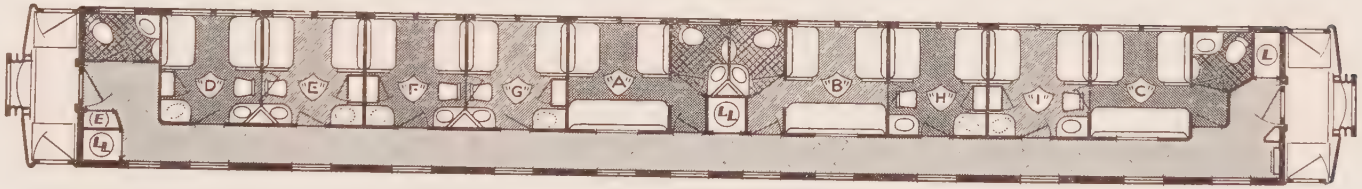
L = LOCKER
LL = LINEN LOCKER
E = ELECTRIC SWITCHES

partments are in the centers and drawing-rooms at the ends; and those that have a precisely reverse arrangement. This all is part of his job. At least, he makes it part of his job. . . . And so it is he who is the one man who picks out the precise cars for each section of the Century. It is he who translates car "46" of the first section into the *Glen Eyrie*—because the *Glen Eyrie* is the precise sort of a Pullman fit for Century service. Not every *Glen*, even of walnut finish, might do for this train. There is an approved list, by name, of the Pullmans properly equipped for the train. No car not on this list, no matter how seemingly fit, may go into it.

It so happens that your Pullman ticket for the Century, this very day, calls for a compartment in Car "46." This important detail is marked upon its face. But you do not know until you reach the train that it is the *Glen Eyrie* that is to haul you across the land to Chicago. The man who sold you the ticket did not know that, neither did the man that made the reservation upon his telephoned request. Even the porter on his way to the train this morning did not know—not until he was aboard it. Only the boss yardmaster knew. And even he did not know that he would use the *Glen Eyrie* until the telegraphed consist came up from the Grand Central, at a little before eleven.

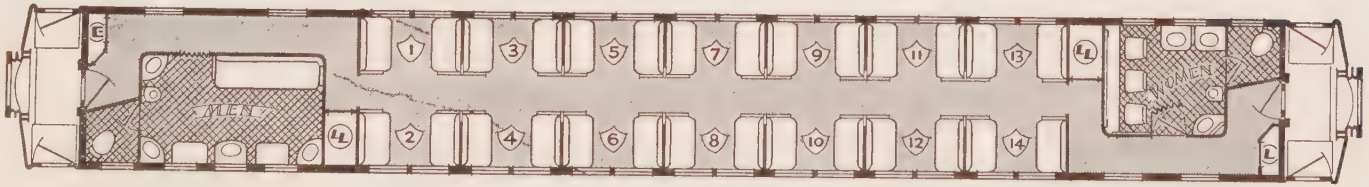
Here was where the map portion of his well-trained mind came into play. The foundation of that map always is the curious gridiron-like pattern of the tracks of the yard, three major sections of it all, each consisting of a series of ten or a dozen parallel storage tracks, all of them reached by a lead or entrance track, which in turn reaches the main lead tracks, which already have been seen.

SKETCH PLAN OF PULLMAN ALL-DRAWING-ROOM-COMPARTMENT CAR



3 DRAWING ROOMS — "A" "B" "C"
6 COMPARTMENTS — "D" - "I" INC.

SKETCH PLAN OF PULLMAN 14-SECTION SLEEPER



L = LOCKER
LL = LINEN LOCKER
E = ELECTRIC SWITCHES

The West Yard of these three is the roosting place of the Century. Upon it are standing the various cars that will make this day's three-section train. It is the job of the general yardmaster and of his well-trained organization to know precisely what cars are standing on those storage tracks and just where they stand. And which of these cars go into the Century.

The ordinary handling of a railroad yard consists of the operation of a succession of "cuts" and "pulls"—switching engines and cutting cars away from other cars upon the storage tracks, pulling them out upon the lead tracks and then, perhaps, backing them into place on other tracks to unite them with other cars or strings of cars. In this way, a train gradually is upbuilded. (In reverse fashion it may, at the end of the run, be distributed.) . . . In this way, the Century is daily upbuilded. A layman might think, without ever giving thought to the matter, that the train which arrives at New York in the morning was, in some way or other, turned around intact, cleaned out a bit and then backed into the station ready for its return trip to Chicago that same afternoon.

A vastly more involved and complicated process is necessary.

Theoretically, the equipment of the Century that arrives in New York this morning does not depart this afternoon, but tomorrow afternoon. This gives a resting-time for the cars, time for the small army of cleaners to go all over them, inside and out, to make them spick and span for the return journey.

In practice, this theory is achieved, sometimes, but by no means always. In practice, traffic has a way of running unexpectedly to high levels, indeed. Moreover, it does not

always balance. There may be many, many more folk going out of New York on the Century this afternoon than arrived in from Chicago this morning. What would become, in such a case, of any inflexible rule about holding equipment over until the following day? So it is, that, at many busy seasons of the year, it becomes a matter of necessity to turn the Century around and run the very equipment back to Chicago in the afternoon that arrived that very morning from the West. This requires quick work on the part of the yardmasters. But that is the very sort of thing that they are trained to do.

Flexibility is the rule of the railroad. And if, for any reason, there should be enough cars available from the incoming Centurys, there is always a reserve from the incoming Southwestern, which, although arriving at nearly the same hour in the morning, does not depart until over two hours later in the afternoon. By that time, in any emergency, other Pullman equipment can be found to make the outgoing Southwestern. The general yardmaster gets to be an expert borrower. Always he works close to time. But the fact that Mott Haven is not only a great passenger-car reservoir in itself but that it serves not one, but two, of the most important passenger-carrying railroads in the country is an asset in itself. And a real help to him.

(Mott Haven has actual *track* capacity for several hundred standard-length passenger-cars. But that is not its *working* capacity. That is far less. An efficient railroad yard, like an efficient railroad, itself, is one in which cars do not stand, but at all times move, freely and easily. You cannot play checkers with *all* of the squares upon the board occupied. And you cannot operate a railroad yard unless you keep lead and other tracks clear enough so that your switch-engine can get freely back and forth for the makeup of their trains. . . . At Mott Haven there are

some fourteen switch-engines in simultaneous operation. The room that must be given to them and to their constant movement brings down the working capacity of the yard to about 450 cars, which, as has already been put down, will shortly be appreciably increased. . . . Incidentally, it should be noted that this normal daily working capacity of 450 cars is, upon necessity, very greatly increased. On a single abnormal summer day, Mott Haven has received and sent out more than 1700 cars—chiefly Pullman—in about twenty working hours.

Another factor renders it not merely impracticable but almost impossible to turn the through trains solid and send them westbound again. It might be possible to do this very thing—with the aid of the Mott Haven "Y"—if the outgoing trains of an afternoon were always of the same length and capacity as their fellows which arrived in the morning. But this other factor demands attention. It is a detail, a small detail, if you please, but one of those important small details that makes riding on the Century so very comfortable indeed. . . . It is a rule in the daily makeup of the Century that all drawing-rooms and compartments, whenever possible, must face the Hudson River side of the railroad both coming in and going out of New York. This means that the bulk of the sleeping-cars must *not* be turned in the New York terminal. But, obviously, both club-cars and observation-cars must be turned. There is the rub. And there is one of the things that brings grey hairs to the head of the general yardmaster.

So it is that, in practice, the incoming Centurys, after they have discharged passengers, baggage and mail in the Grand Central Terminal in the morning are "cut" just back of their club-cars and in this incomplete fashion hauled back to Mott Haven and the direct lead tracks into that storage yard. Club-cars of the different sections are then coupled together, to them are added the observation-

cars and all of these are given a turn around on the "Y" before they are sent into the leads. . . . Then all are again correctly headed for Chicago. No car is put into the Mott Haven reserve until it is correctly faced for the outgoing trip. Here is one of the infinite details that the yardmaster must remember, and remember correctly. He also must remember that dining-cars in movement go with their kitchens at the rear. It is not the Century way of doing things to have smoke from the galleys seeping into the windows or the ventilators of the dining-cars.

All these things to be recalled—and many more beside.

At eleven o'clock of a morning, the general yardmaster is going around his big yard and upbuilding his train. The cleaners have been busy at the sleeping-cars—more of that in a moment—and at the dining-cars, too, which have not only been thoroughly cleaned but stocked against the appetites of Century riders this very night. (Of this last, much more also, in due time.) Two switching-engines and their crews, assigned exclusively to the makeup of the train already are hard at the job. The bosses of the switch-crews now have the names and the locations of the cars for each section and they are making cuts and pulls. Under their skilled hands, the sections of the train are being upbuilded—as a small boy builds a house out of his blocks—and with never a lost motion.

FRESH LINEN

At that it will take more than eighty "cuts" to make the three sections of today's Century. The amount of preparation work that goes on behind the scenes just to make it ready for the day's

run is almost incredible. An unseen, but very real, army of men and women have been at the task, from early in the morning right up to the last possible minute before her departure from the yard. It takes three crews of forty-eight men and women to make the sleeping-cars alone fit for the journey. These tackle the cars, as soon as they come up from the Grand Central and the incoming trains. The soiled linen, which the porters already have packed into great bags, is taken off and sent to the laundry. Then up come the carpets and in come the sweepers and the vacuum cleaners. Outside a gang of men is washing the outer surfaces of the cars, first with the acid combination and then with soap and water. Inside, there is not a corner of the car that the cleaners do not reach. They dig into the springs and cushions and mattresses and blankets. A Dutch housewife could not have a merrier time of it. Not by any possibility.

While the Pullman folks are at the sleeping-cars, another gang of their cleaners are at the club-cars. Forty-eight of these "clubs" and "buffets" are handled at Mott Haven on an average day—a goodly portion of these for the Century—and into them go special supplies; cigars and cigarettes and bottled goods and playing-cards and the like; the lotions, soaps, and other equipment for the barbers. . . . All the rest of it.

Finally, the fresh linens come; no small ration for a train such as this. At Mott Haven, every day is wash-day. The great laundry there runs almost continuously and has a daily output of more than 100,000 pieces. (In addition to which an emergency reserve supply of 25,000 pieces is at all times kept on hand to meet any unexpected situation.) As this "clean wash" comes out from the laundry, the skilled eyes and fingers of well-trained women go over every bit of it. Assortments are made. Only the very best of the sheets and towels and pillow-cases may go upon the

cars for the Century. Nowhere is the "Century standard" more carefully maintained. . . . A slightly torn and darned sheet is put aside, with a quick thrust of the arm. It is good, at least it is perfectly serviceable. But it is not quite good enough for the Century.

As the last of the supplies are being carried aboard the steadily upbuilding train, the crew itself begins to put in an appearance. First come the porters. The train is not due to depart from the Terminal until 2:45 o'clock but the road takes no chances. These men report at Mott Haven at sharp noon. They are briefly inspected as to uniforms and personal appearance. (A more careful and deliberate inspection of each man and his uniforms is made at the end of the month.)

There is Century quality in the porters, as well as in the cars. The men who personally operate its many trains are picked men. There is keen competition for this service. To have a "Century run" is a distinction in the Pullman service. Men who are not the best cannot get these runs. Men who are not the best do not long continue to hold them.

These picked men know as a rule the days that they are apt to run out upon the train; for the month at least. A skeleton schedule gives them their departure days; both from New York and from Chicago. But this schedule is not always adhered to; in detail at least. It is made up upon a basic structure of two Centurys a day in each direction. But most of the time the actual service of the train well exceeds this minimum. Then it is the Pullman folks must scratch *their* heads and find thoroughly competent "Century men" to man the extra sections.

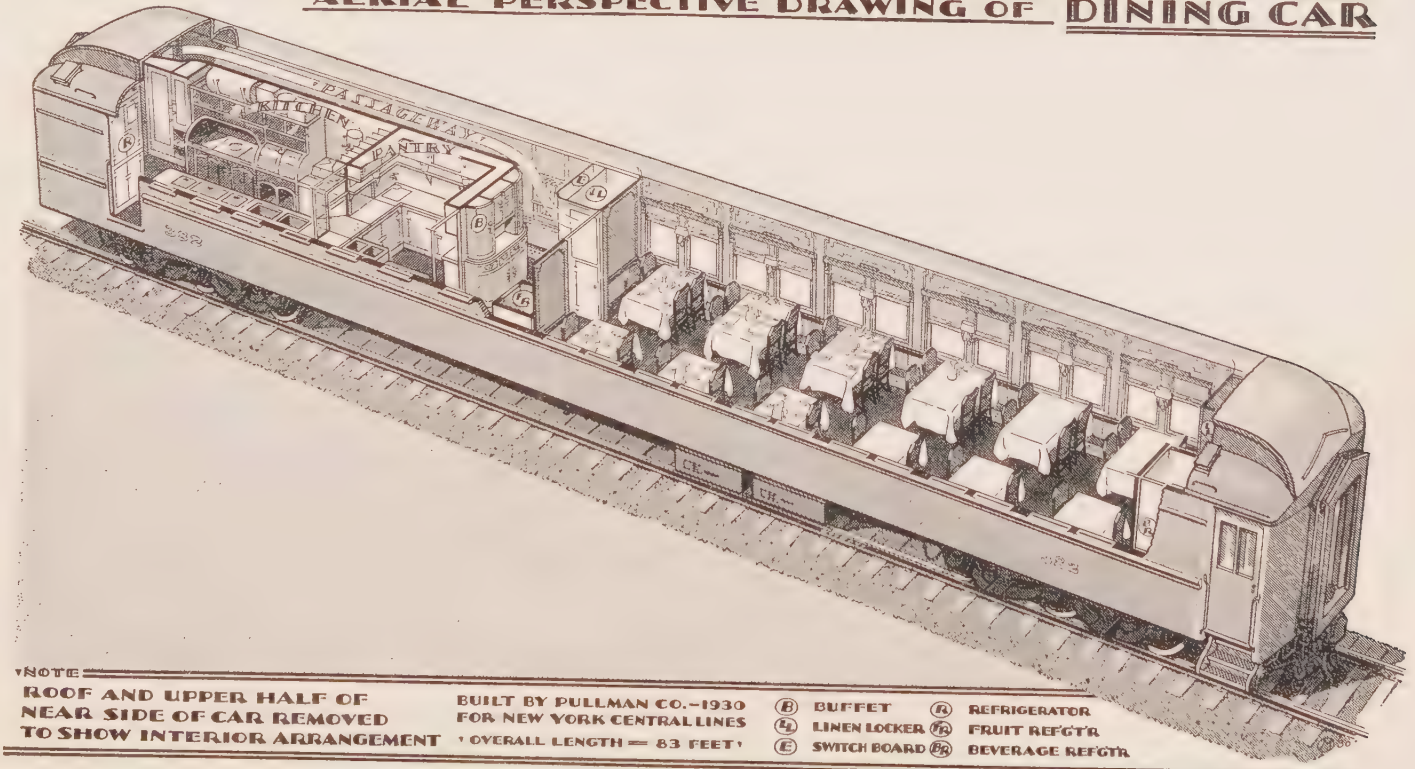
With equipment, the night layover at Mott Haven can,

on a pinch, be foregone and the cars turned and sent back to Chicago the very day that they arrive. But you cannot "double" men in quite the same way that you do cars or locomotives. Not only are there statute laws against this, but also the laws of common sense. Century service cannot be rendered by men who are tired before the run even begins. Therefore, there comes into play the common sense rule that the incoming crews get at least one night's rest in their homes before starting west once again.

Yet extra Centurys do have to be run, and men—properly trained Century men—must be found to run them. Which means that the "extra list" in the Pullman offices down at the Grand Central and up at Mott Haven, is a studied and carefully made up affair. Conductors and porters are as carefully picked and trained for it as for the main schedules—not merely conductors and porters but such Pullman specialists as the maids, the manicures, the train secretarys and the barbers. . . . It is not every barber that can shave a man on a train running fifty miles an hour; not even when the track is of the standard of the main line of the New York Central Railroad. And the rule of "any Century as good as any other Century" cannot fail in the case of the barbers. A reserve of well-trained razor handlers is available. Between times they work in local barber-shops, probably as extra men. At any minute the summons may come to get ready for the Century that afternoon, or the next. Like emergency men of any other sort, they, too, must always be ready.*

*It will be understood that in American railroad practice the cars for the operation of fast expresses of the Century type, with the exception of the dining-cars, baggage-cars and mail-cars, are generally owned and maintained and furnished by the Pullman Company. Similarly the men for these cars, conductors, porters, barbers, maids and secretaries, are furnished by the Pullman organization. The actual train crews—engineers, firemen, conductors, trainmen (brakemen) and baggage-masters—are furnished and paid by the railroad company; which only exerts an indirect control over the Pullman staff.

AERIAL PERSPECTIVE DRAWING OF DINING CAR



NOTE
ROOF AND UPPER HALF OF NEAR SIDE OF CAR REMOVED TO SHOW INTERIOR ARRANGEMENT

BUILT BY PULLMAN CO.–1930
FOR NEW YORK CENTRAL LINES
(OVERALL LENGTH = 83 FEET)

(B) BUFFET
(L) LINEN LOCKER
(E) SWITCH BOARD
(R) REFRIGERATOR
(FR) FRUIT REFG'R
(BR) BEVERAGE REFG'R

◆ V ◆

WHILE the sleepers, the clubs and the buffets of the Century are being cleaned and stocked and made ready for the night's run, another phase of the train—to some folk the most important of all—also is being made ready. Passengers who are twenty hours upon a train must be fed; and well fed. If anything, they are far more critical upon trains, where there is time to be killed and time for killing time, than in less itinerant restaurants.

"Century standard" reaches a high peak in the Century dining-car service. Twenty-eight years of study and experience have gone to bring it to its present level. And back of these, other long years of experience in catering to the high-grade passenger patronage of the long-established New York Central system. "Feeding the trains" in America has become a high art, indeed. Nowhere more so than upon these splendid fast super-expresses that have become so distinctive features of its transport.

The dining-cars, that are part of the consists of the Century are trim and clean and new, radiant in their spotless linen, gay in their brave show of flowers and glass and porcelain, are but the outward expression of a carefully upbuilded structure. The heart of that structure sits in a compact office on an upper floor of the new Central Station in Buffalo. The center of it all is a man—a well-trained and experienced caterer. He is the manager of dining-car service on the New York Central Lines. Just that, and nothing more. His office suite consists of a small group of rooms. Just that, and nothing more. But his bailiwick extends from New York to Cincinnati, St. Louis and Chicago; twelve thousand route-miles of busy railroad over which 156 rolling restaurants steadily are making their way. Sometimes as many as twenty or twenty-five

of these cars are in Century service alone at a single hour —more cars than there were on the entire New York Central Railroad, when the dining-car manager came to it —more than twenty-eight years ago.*

To supervise a chain of 156 restaurants that stand still and stay put is no small job. When they are in constant motion, up this line and down that, across this way and over that; restless restaurants forever here today and gone tomorrow, the problem is increased, immeasurably. Weather conditions, varying tides of traffic, have become as nothing to the dining-car manager and his men. It is their job, despite all these things, to maintain restaurant-car service upon the New York Central Lines at an unvarying degree of excellence—and this they generally succeed in doing.

Dining-car service reaches its full heights on the Century. . . . The newest cars, the longest-service high record men consistently are chosen for it. The menus, china, glass, napery are all New York Central standard—there is no better. In its beginning days it served a table d'hote dinner, in addition to its long-established a la carte offerings, but a few years ago this was discontinued. Century patrons showed that they did not particularly care for that type of ready-made meal. They registered the usual preference of smart travelers for food cooked to order and served piping hot, no matter what the hour. So, as a substitute for a table d'hote, the so-called "blue plate service" was introduced upon the dining-cars of the Century. It has proved a great success. The majority of the train's patrons order it. A combination of an attractive

*These cars represent a total investment of more than $7,800,000. An eight million dollar restaurant is a catering business not to be ignored.

meat or fish entree with appropriate vegetables, it is cooked to order (and it is against the Century's book of rules that more than four or five of these may ever be cooked in advance, no matter how great the rush), and so served to the patron at all times hot and freshly prepared. With a combination of a soup, a salad or dessert and the train's own grade of coffee, the Century feels that it need make no apologies whatsoever for its cuisine. It is willing to match it against the finest of foreign restaurant-cars, even in France, where cooking reaches its very apotheosis.

The "blue plate service" is changed weekly, or oftener. Inasmuch as the menu-cards upon the Lines west of Buffalo are always different from those on the Lines east, the "blue plate" is never the same at the two ends of the road on a given day. The business man who cummutes from New York to Chicago, or from Chicago to New York, to spend but a single day in either town—and he is legion —is not confronted by the same good offering on the return trip that he had on the going. . . . Another fine detail of Century service that has received a careful bit of attention.

Whilst the cleaning-gangs are busily at work in the Pullmans of the incoming Centurys, the dining-cars also are receiving their full meed of attention. Scrupulous care is shown in cleaning out the dust and the debris of the run in. The cars literally are stripped before the vacuum cleaners and strong and ready arms start their campaigns within them. Chairs and tables, everything removable, are removed. When the cleaners are finished, these "diners" are aired thoroughly. . . . After which windows are closed again and, if the season be cool, the heat turned on. . . .

THE VANGUARD OF THE CLEANING CREW—
TO BE FOLLOWED BY THE VACUUM CLEANERS

Let us say that a certain dining-car definitely is ordered into service for today's Century. Call it the "382." Before 10 o'clock a fourth assistant cook has made his appearance within it and has started the coal fires in its long range. Gradually the other members of the kitchen staff of that particular car arrive, last of all, as well befits his position, the head chef or chief cook of the outfit.

For a standard dining-car in Century service—and New York Central does not now operate anything other than standard full-sized dining-cars—the human equipment consists of a steward and eight waiters and a chef and three assistant cooks. This force prepares and serves meals to a dining-room of thirty-six seats, divided equally

into tables of fours and of twos. . . . They differ from the men in the Pullman service in that they are definitely assigned to a given car. An extra waiter or two in the crew assignment provides for a steady system of reliefs. In addition to which there are relief stewards, head chefs and assistant cooks who are rotated between all the cars in any given direction.*

Before he left his car at Mott Haven at the end of its incoming run, the steward made quick but thorough inventory of his food supplies remaining. Similarly, he took note of his china, glass and linen equipment. Then made a large requisition of what was needed to bring all up to normal once again. This dining-car requisition is, indeed, a mighty document. Down its parallel columns there are listed the many standard necessities of a well-stocked restaurant. These begin, under the Meats, with Bacon, set down not less than ten different varieties of Beef, pass quickly through Chicken, (Broilers, Roasters and Fowl), Clams and Crabs, halt at Ducks, run the gamut of Fish and so down the fleshy alphabet to Turkey and to Veal. Quail show themselves; and so do Lobsters. The taste of the Century patron is nothing if not epicurean. And so Vegetables get off with Apples and Asparagus and pursue a similar course down Vegetable Street, pausing for an instant at Chives and Galax and Leeks before reaching those fine old terminals, Squash, Tomatoes and Turnips. Fresh vegetables, as well—in infinite variety. Groceries?

*In New York Central dining-car practice the parent system is divided into two major regions lying, respectively, east and west of Buffalo. Under ordinary circumstances, the cars in the west region do not enter the eastern territory, and vice versa. In addition to which there are the separate dining-car fleets of the other New York Central properties, the Michigan Central, the Pittsburgh & Lake Erie, the Big Four and the Boston & Albany railroads. All of these conform to the general standards of the system.

Of course. Allspice and Almonds and Anchovies and Thyme and Vinegar and Wheatena and Yeast and four long columns of the things that lie between them. Tablewaters and Cigars and Cigarettes. Glassware and Crockery. Much more than grocery stock. No ordinary grocery store could fill a requisition that even enumerates Alarm Clocks, Waffle Irons, Keelers, Skimmers and Toasters.

No ordinary grocery store is it that is this day to fill this requisition and forty or more other requisitions more or less like it. In a minute the commissary at Mott Haven will be seen. In the meantime, imagine the steward of the incoming dining-car "382" busily at the list making out the numbers of each individual item that he may wish or need. There are spaces in thin columns opposite each item where the commissary accounting forces will later place the cost prices of each—and the total will be held against the dining-car steward in that place of all final reckonings, the auditor's office. . . . But while this is held *before* him, it is not held *against* him—as a threat. Merely as a precaution. The steward is asked—nay, ordered—to make sure that he does not stint on delicacies, as well as on "standards." The Century patron never is to be deprived of the best that ever the market affords.

This slightly intricate piece of bookkeeping being finished, the incoming steward completes another: This is a report of his trip, in which he will show the number of passengers all told on his train, the number of breakfasts; lunches, and dinners served, the precise hours of service, whether all desiring service were served, whether there was waiting for seats and how long, and whether there were any complaints. If anyone imagines an oversmart young steward in an embarrassing situation omitting this last detail, let him also imagine in an after hour, the shrewd dining-car manager up in his Buffalo office getting some letter of complaint from a patron. (They *do* come, *some-*

times) and then checking through these carefully filed statements to see if the steward on that particular day glibly reported "no complaints!" . . . Lesser details also go upon this document; the feeding of the train-crew and last, but not least, the total receipts by meals, and a most interesting percentage showing the relation of actual food costs to earnings. If this last is as low as 51 or 52 per cent, the dining-car steward can congratulate himself.*

The dining-car steward having dropped his report, his requisitions and his cash receipts in at the commissary, he is free to go home, for a few hours, before starting out on the road once again.

In the meantime, the commissary busies itself.

Its storehouse keeper runs down the requisition of dining-car "382," asks no questions but begins filling it. If he lacks any item upon the list he will have to send out and get it—post-haste. As he collects the supplies together, he places them in a bin, marked with the number of the dining-car and opened through an outer wicket. This is for the dry groceries, so-called, the drinkables, the bread and the rolls. . . . Meats and fish, fruit and fresh vegetables, eggs, butter, milk and cream and cheese must be handled more delicately. So it is that a considerable portion of the ground floor of the commissary is given over to a succession of ice-boxes, devoted to each of these. And so divided that there is not the slightest possibility of the odor of any one of these foodstuffs being communicated to any other of them.

*It should be remembered that this more-than-half of all that the car takes in is for raw foodstuffs alone—all the other costs of operating the car—wages, fuel, laundry, upkeep, etc.—must come out of the less-than-half of the car's receipts. And still no allowances made for the depreciation upon the car or the track it rides upon. Or for any profits. Dining-cars are not operated at profit. The problem is to hold down the loss, to as low a percentage as possible.

Once in ever so long a while the Experienced Traveler gets aboard a dining-car and with great pains and gusto tells his waiter just exactly the sort of a cut of steak or a chop he wishes prepared for him. The suggestion probably is accompanied with a wink, or a tip. Neither is necessary in New York Central dining service. There it is that all patrons are treated exactly alike. No chef has any control whatsoever over the size or the cut of a piece of meat. . . . All that has been determined, automatically, back in the commissary at the terminal. An experienced butcher working with his cleaver at his wood-block cuts the chops and the steaks before they are issued to the cars. His trained eye and hand divides them, with hardly the variation of a single ounce between them.

The method is interesting.

Take, for instance, a rack of lamb!

The shoulder is first trimmed off and tossed into the makings of future soup-stock. Eight or nine individual chops probably will be the residue. Of these, not more than three will ever reach the Century patron as "broiled lamb chop." Yet the others are not cast aside. "Breaded lamb chops" will utilize them. The smallest of all of them may be used in rations for the crew of the car. Nothing is wasted. But no waste is served the patron. Be assured of that.

This cleaver—the arm that swings it—is a well-trained weapon. It cuts the sides of beef, as well, with an almost mechanical precision. Sirloins and "small steaks" of an almost uniform variety are the result. It gashes into the tender hams that once came out of the west and the much-smoked ones up from Virginia and from a single ham, weighing say from fifteen to sixteen pounds, it cuts ten double slices—the rest will be used for lesser cookery, than broiling or frying. One of these double slices makes a full portion, with or without eggs, a half of it, the so-called

"reduced portion" as it is described upon the bills-of-fare. . . . No guesswork about any of this. No opportunity for chef or steward or waiter to show any favoritism whatsoever. . . . Each individual portion of chops or beef or ham is carefully wrapped in waxed paper and at the last minute before the dining-car is ready to set out upon its travels once again, it is placed in the designated bin. Fish cannot well be cut in advance. But fish are purchased, as far as is humanly possible, almost to a uniform size and four cuts out of each is the general rule for its preparation and service.

The same general rule is followed with the poultry.

With the highly advanced packing-house methods followed by most fine poulterers today, it is easy to order fowl at sixty pounds to the dozen, broilers at twenty-eight pounds to the dozen and roasting chickens at three and a half pounds each and have each of these classes come out so uniformly as to make one believe that Mother Nature, herself, is at last giving some heed to the modern laws of standardization.

Seven cuts to a pie, eleven inches in diameter. And in order that an average chef may be aided in the difficult problem of dividing the circumference of a circle into seven mathematically even segments, a tiny mechanical device, builded up of stiff wires, is given him, to guide and direct his knife.

No guesswork about any of this.

Good railroads do not run by guesswork, not even in as highly human a department as the cuisine. The seven cuts to the pie, the five portions of ice cream to the quart not only assure impartiality to the guests of the Century and all the other Central trains, but they are also of infinite value in a final accounting. Check is kept against the individual portions of all foodstuffs that go out on issue.

DINING CARS BEING ICED,—PROVISIONS BEING PUT ABOARD AND THE LAST POLISHING OFF AT MOTT HAVEN YARD

And a source of great waste and loss in many a hotel and restaurant is stopped, at the very beginning in this carefully developed scheme of dining-car operation.

Foodstuffs and drinkables are not the only issues to the outgoing dining-car.

It must have its full equipment of clean linen, china, glass and silver. Careful scrutiny must be given to each piece of the linen. A tear, and a darn, is not necessarily a damning thing. If the tear is a really bad one, the piece of damask may be cut down by the sewing women right within the commissary. A big tablecloth, or a table "top"

may be cut to fit a small table; if necessary, even to a napkin. There is little waste, little loss, in any of this.

But darned linen, no matter how immaculate otherwise, cannot be Century linen. Neither can nicked plates or glasses or silverware that is tarnished or dull. West Albany—the great industrial plant of New York Central—has, right amongst its great car and locomotive works, a small but exceedingly efficient shop for cleaning and re-plating with silver all the tableware of the road. . . . Another fine detail of good passenger service.

Neither can a worn carpet and even a slightly disabled chair go back into dining-car "382," if it is going into Century service this day. It just is not done. But in order to see that it is not done there must be eternal inspection and watch. Unrelenting effort.

The fourth assistant cook having started the fire and all the other cooks and the service staff having arrived, the "382" is ready for restocking. The carpet goes down again, chairs and tables into place. The foodstuffs all come in. Into its marvelously ingenious kitchen—a space seventeen and a half by seventeen feet, in which a hundred or more varied and delightful dinners will be served this very evening—goes a vast amount of supplies. The chef will find in one drawer underneath his working-table his supplies of fish, in another, carefully segregated, those of meat—those steaks and chops and slices of ham and bacon that, but a moment ago, we saw being carefully cut in the commissary and put away in their individual wrappings of waxed paper—and of game and poultry. (Yes, game *is* served on the Century. Going out of New York where, under certain conditions, it can legally be purchased and served.) In a tall cupboard at his left—which, on inspec-

tion, develops into an icebox—are eggs and butter and lard and certain fresh vegetables. Potatoes have a bin of their own. . . . Overhead is a long row of pots and kettles and skillets, each shined to an almost impossible brightness. . . . A place for everything and everything in its place. If only the kitchen of the average house could be designed with such a careful regard for saving time—and footsteps!

Adjoining the kitchen and connected with it by a large serving window is the pantry, approximately nine by seven feet in its floor dimensions. Here are the table supplies; the table butter (incidentally, there is not the slightest variation between Century table butter and Century cooking butter—each is of the very best that the market affords) bread and rolls, milk and cream. . . . The coffee urns, the little individual pots of tea and cocoa. . . . Other drinkables as well. . . . Great quantities of ice—of infinite value in service; particularly in warm weather. . . . Huge containers of fresh, soft ice cream. . . . Condiments—of every sort. A Londoner, trained to Belgravian fastidiousness in these minute things, will find himself forever at home upon the Century.

The other supplies of the Century dining-car—beverages, cigars, cigarettes, candies, as well as linen and extra china—are kept by the steward in deepset closets on either side of the entrance to the dining portion of the car. Again, there is no waste of space. The designer of a yacht interior or, better still, of a submarine or a plane could not possibly make better use of every square inch of available room. Multum in parvo. . . . That's the Century dining-car. . . . Not only on the Century but on the other fast through trains of New York Central. The entire fleet is held to a high standard of excellence.

◆ VI ◆

TO the expert master of the yards, dining-car "382" is not an exquisite traveling restaurant, (planned to the last degree of elegance, not alone in equipment but in its stores and personnel), but it is just dining-car "382."* A mere unit in the game of checkers that eternally he is playing on his Mott Haven board. There are lots of other diners to go into the consists of today's Centurys. Perhaps as many as eight or ten or twelve of them. *His* concern is merely to see that they are properly placed in the steadily upbuilding trains. His concern is not that they are properly stocked and manned. When the time comes to place them into their trains they must go—whether they are fully stocked and manned, or not. The commissary knows this. And knowing this forever is ahead in its part of the work.

As noon approaches, the general yardmaster and his staff mind their watches pretty closely. There must be no delay in placing the outgoing Century into her position in the Terminal. Two o'clock is the "upset hour" for this. At noon, two o'clock seems quite a long way off; but not to the Mott Haven folks. They know that five miles of remarkably busy track intervene between them and the Terminal. That delays *do* come upon that remarkably busy stretch of track. And that explanations and alibis together are mighty unpopular down at headquarters.

*On the New York Central, most of the dining-cars are assigned numbers between 350 and 499.

READY TO LEAVE MOTT HAVEN

The First Century is ready!

Eleven long olive-green Pullmans and a New York Central dining-car. The train-crew is aboard, to a man. The chef is sharpening his knives and the barber is feeling his razors; the trim little colored maid—who, upon necessity and demand, becomes an expert manicure—is adjusting her cap and apron. The "shop-engine" which is to haul the First Century—hind-end-to—down into the Terminal couples itself to the observation platform. . . . There is a final halt. Air-test. Brakes must be right. Men run up and down each side of the train, with bolts and wrenches and hammers in hand, inspect every detail of running equipment, look with carefully trained eyes for the least mechanical defect. It would delay and hamper the First Century tremendously if a defect should be found now. But better all the delay in the world than the slightest defect in the equipment. . . . And so this last minute inspection.

Slowly, but surely, the First Century works its way out upon the "lead," slips quietly over the "grid," gets a friendly green eye from the towerman, and enters a southbound "main". . . . The general yardmaster ment-

ally waves it a fond farewell, then forgets it. The Second Century is in the making. After it is gone, there will be the Third. . . . And, perhaps, a Fourth—almost certainly so if it is a busy Saturday or Sunday in the autumn. . . . Possibly a Fifth. . . . A Sixth. . . . A Seventh.

In slow procession the Centurys come down to the Terminal. At Fifty-first Streeet Tower, there in its subterranean yard, each is halted. The "shop engine" is detached and sent into a siding. . . . It is a part of the credo of the Century that its daily departure from its terminals shall be made something of an event. A thing done with eclat. Like the sailing of an important transatlantic liner from her pier. . . . A departure well worth recording on one's memory. . . . This means, among other things, that the gay and attractive observation-platforms of the several sections, with their illuminated signs, shall be the first things to catch the outbound travelers' eyes. A thing that could not be done easily with electric locomotives standing just in front of them.*

The departure of the Twentieth Century Limited each afternoon of the year from New York to Chicago is an occurrence of no small moment.

The noontime rush and excitement in the concourse of the Terminal is well over. The heavy one o'clock trains for

*In all probability, this "shop engine" originally was a "road engine" in regular train service between the Grand Central and Harmon. It is not new, yet its usefulness is not outlived. The steadily increasing weight and length of the train have made it necessary to supplant it with larger and heavier motive-power units—huge electric locomotives each with four four-wheeler trucks—which can handle the longest Century at the maximum speed required.

Boston, for Buffalo, for other places too, have departed. A momentary lull settles down upon the place. But only momentary. . . . Soon, the prescience of an oncoming event, foreshadows itself. Sleek, black, red-capped porters, lunch-filled, come into the station, place themselves at its many entrances. Smilingly, they are alert. Smart looking travelers, and all their impedimenta, begin to appear. The Red Caps bestir themselves mightily. There is fresh activity. Whispered talk. The anticipation of a real event.

The starting out of the Century is nothing less than a very real event.

Since noontide its departure has been announced, formally, by the long shiny black indicators which stand at the side of each platform gate in the Grand Central and tell of the next train to depart from that particular platform, its precise hour of departure, its stops and principal connections and the numbers of its Pullman cars—if any.

IN THE GRAND CENTRAL
THIS IS "CENTURY HOUR"

The Century always fills two of these blackboards, right in the middle of the concourse—generally more. They announce but one stop, Chicago. But its Pullman numbers run to a considerable length. And its influence much farther still. The Red Cap who takes your bag at the automobile entrance in Vanderbilt Avenue sizes up you and your luggage, knowingly shows his teeth and asks, "Century?" Century, of course. In the Grand Central this is "Century hour." They have even replaced one of the regular illuminated signs over a concourse ticket window with a special one which reads:

TICKETS FOR
20TH CENTURY LIMITED
TODAY ONLY

Which means exactly what it says. The man who comes into the Terminal at 2:40 p. m., and suddenly makes up his mind then and there that he will go to Chicago that very afternoon on the Century, would find that he could have a comfortable place upon the train. The thing is by no means impossible. It has been done—repeatedly.

Within the platform-gates, preparations are still more especial. Down the long platform between the parallel Centurys—the French would delight in calling them "quays"—long carpets of grey and red have been rolled. Overseas they do that sort of thing for royalty alone. In the Grand Central the Century itself is royalty enough for such an honor. No real New York Central man believes it to be anything less than truly regal. . . . Said a *writer in the daily press not long ago: "There are trains and trains but no train has ever received such adulation as does the Twentieth Century Limited from all New York Central men. It is their pet and pride. To them it symbolizes their railroad."

*Franklin Snow in the *Christian Science Monitor*, November 1, 1928.

The final exquisite touches of predeparture have been made to the train, itslef. The train secretaries have arrived, each bringing with him his own typewriting machine and his writing supplies. The current magazine in their leathern binders and the stationery have been placed in club-cars and in observation-cars. To them have been added the latest editions of the evening newspapers. (There will be more of these put on at Albany and at Syracuse; tomorrow morning at Elkhart, the Chicago morning papers will come aboard.) Telephones are plugged into each of the observation-cars; wondrously handy things for last-minute messages, right from the train. A rolling newsstand—a counterpart of those used in the great railway stations in Europe—with books and magazines and candies—comes down the platform. The Western Union telegraph boy takes his plain position.

Nowhere else in all the world such a train departure as this.

In each of the immaculate dining-cars, waiters and stewards are seated at the table, rigid, immovable, in a military-like precision. But only until some passenger arrives for a belated luncheon. . . . Then each servant of the "382" and all its sisters in the train rises to his feet. Stands at his post—still in that military-like precision. No other position is even remotely possible—with a guest of the train in the car.

Lunch in the westbound Century is by no means an unusual thing. Remember that the train is placed in the Terminal and opened to its patrons at two o'clock—and the dining-car is made immediately ready for belated lunchers, who need have no worry about missing their train. . . . A small convenience; but small conveniences, as well as the large ones, are all features of Century service. And this particular small convenience is one that seems to have a large appeal to many folk.

Two thirty.

There is plenty of rush and bustle in the Terminal concourse by this time. People coming. People going. The blinking stars of its vaulted sky-blue ceiling look down upon a scene precisely similar to the first-class departure section of any well-known steamship lines. . . . Travelers keep arriving, heavy with hand luggage, extra coats, canes, even perhaps a dog or two. Porters struggle after them, with still more luggage. The very zenith of Red Cap anticipation. . . . Farewells are being said. There is chatter and excitement. . . . An incoming local from New England brings two men, catching the Century, by the traditional hair's breadth. . . . A still more belated traveler comes breathlessly up the steep stairs from the Subway and a Wall Street express. . . .

The farewells become final. . . . The travelers are converging upon the train gates. They wave good-byes then disappear—through the deepset gateways of the stout stone wall—and go down the vista of the gay grey and red royal carpet. Last messages are sent back; final papers purchased at the rolling newsstands in the quays. . . . The conductor of each section takes out his watch. . . . Holds it in his hand.

Two forty!

The *last* last man comes wildly into the station; sees the reserved ticket window for Twentieth Century patrons, rushes madly to it. A little confusion. Not much. The man begins smiling. There is space for him—a comfortable lower berth all the way out to Chicago. . . . He counts his change and picks it up with his tickets. . . A smiling Red Cap is at his heels, laden with his luggage. The negro's observant eyes have noted the car number on the Pullman ticket.

"No need o' worryin' boss. You'se goin' to make it—easy."

He leads the traveler direct to the precise door that opens to the section that has his car; stands while the gateman makes careful examination of the tickets—as much in the passenger's interest as in the railroad company's; it is no pleasant matter for a hurried traveler to find himself aboard the wrong train—sees his charge down the long platform-quay and safely implanted in his proper section . . . . There is a flash of silver.

"Yessa, boss, thank you muchly, boss," grins the negro.

A young man in training for an ambassadorial post overseas might well afford to take careful heed of the manners of the Red Cap porters in the Grand Central Terminal.

And finally.

Two-forty-five!

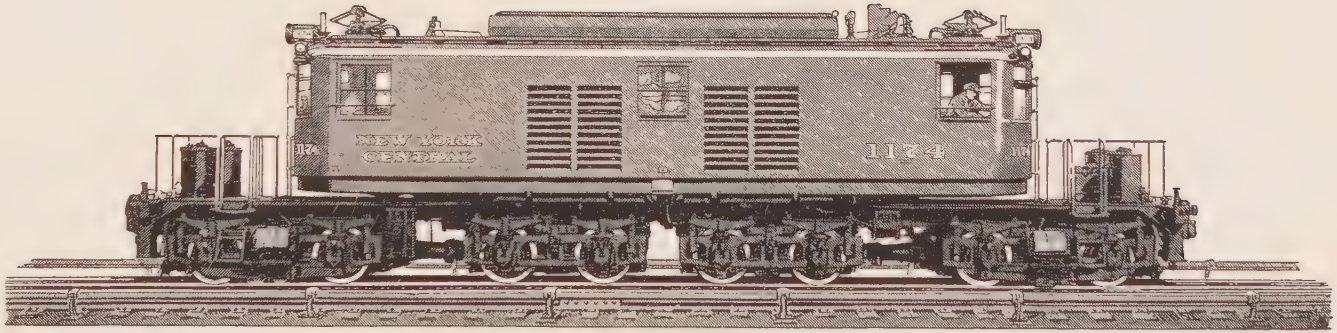
There is no commotion in the train, no striking of great gongs—as they did in the days when the railroad still was very young—no shrieking of locomotive whistles, no racket whatsoever. . . . Station workers pull out the plugs that connect the telephones in the observation-cars with the New York City exchange. . . . The hand of a man in uniform slowly raises; the platform gates in from the concourse close, silently. The passengers who have

been standing in the group hop aboard, the trainmen follow. . . . The vestibule-doors of the cars close—almost simultaneously. . . . The man in uniform drops his hand. The long caravans about to begin the trek to Chicago begin to move in unison, so slowly, so silently, so easily that at the very first their motion is hardly preceptible at all . . . a moment later they are under way and the little flock of Centuries is moving north through the throat of the Terminal and to the open road.*

*This is not the time nor the place for a minute description of the Grand Central Terminal, one of the most wonderful railroad passenger stations in all the world. Enough is it here to say that the main vaulted concourse of the terminal—easily reached from the street on all its sides—gives with an astonishing directness and without any intervening stairs or ramps to the forty-two parallel platform tracks from which all important through trains depart from the Grand Central. These platform-tracks (which also are used by the incoming chief trains) extend at right angles to the main concourse of the station; the quay-platforms between each pair of them are entered by individual doors in the north wall of the concourse. (There are, of course, facilities for the direct interchange of baggage and the like between all of them.) And there are at the side of each entrance doors, the black indicator boards, whose clear white lettering tell the departing train, its hour of departures and the numbers and the types of cars in its consist.

(A feature of these departure quays in the Grand Central, much appreciated of its patrons, especially those who are aged or infirm, is their high level. Their decks are flush and even with the floors of the cars that stand beside them. So that it is not necessary to climb up or down a single step to enter or to leave the trains. . . . A feature which also is of no little value in their prompt loading and unloading.)

These forty-two parallel platform-tracks lead quickly and easily to the throat of the yard and the four main-line tracks that extend straight to the north under almost the full length of Park Avenue. There is a tangle of tracks and of switches—bewildering to the layman but most simple and easy to the men who must operate them. To protect this elaborate "lay-out" there are not less than 517 signal lights and 898 interlocking devices. These totals include those that protect the lower level of the Terminal—the secondary passenger station just underneath and parallel to the main train-shed. This last—which consists of seventeen platform tracks, also with their high-level loading and unloading platform, connects with the upper or main level by an ingenious system of ramp track in the throat of the yard.



ELECTRIC LOCOMOTIVE — "1174"
IN TWENTIETH CENTURY SERVICE BETWEEN GRAND CENTRAL TERMINAL AND HARMON

◆ VII ◆

TWO-FORTY-FIVE.

This is the First Century.

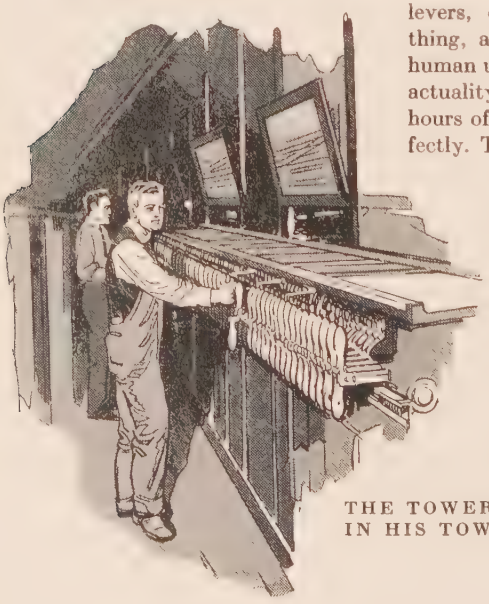
And the sleek black electric-locomotive that is to haul it on the first thirty-three miles of its 960-mile journey this day is the "1174." It was builded two or three years ago in the shops of the General Electric Company at Erie, Pennsylvania, and at the American Locomotive Works up at Schenectady, New York. In length fifty-seven feet, and in weight 278,000 pounds, this engine develops in its four sets of motors between 2600 and 2700 horsepower or, as the railroads prefer to put it, 72,000 pounds of initial tractive power at the draw-bar. Without going into technical details, it may be said that this highly modern form of railroad locomotive is simplicity itself; underneath its long deck are four trucks of four wheels each, each axle with its own set of motors and all giving a maximum of gripping force upon the rail. The driving mechanism of the locomotive is all below the deck or platform. The cabin that surmounts its center portion contains little more than controlling mechanism, air-brake pumps and equipment and an oil-fired boiler to render steam for heating the train.

The "1174," by means of contact-shoes, takes a direct-current of 660 volts from the carefully protected third-rail at its feet. It has tremendous reserves of energy and power. If it were permitted, it easily could make sixty or seventy miles an hour upon the open road. But most of the territory between the Grand Central and Harmon is anything but open road. The first three miles are through the long, well-ventilated, even airy, tunnel under Park Avenue. There are several junction points, all protected by elabor-

ate interlocking and signal devices but none the less requiring great care on the part of the engineer, and reduced speed on that of his engine. The maximum speed permitted electric locomotives on any part of the Terminal Division (up to Harmon) is fifty-five miles an hour. This is on the stretch along the very edge of the Hudson River where the track runs in long tangents and is practically without grade. In the tunnel the maximum is thirty-five miles an hour; over the tangle of switch-points at the main tower* of the Terminal itself, but twelve miles an hour is permitted.

It is over this tangle of switches that the First Century is now proceeding, most cautiously, along the pathway

*"Tower" is something of a misnomer for the long and narrow four-story cabin just underneath the roof of the yard. Yet it performs the functions of the switch and signal towers out upon the open line. . . . This particular tower is almost entirely filled by the long interlocking machine—electrically operated, which controls 17 switches here at the throat of the yard, and has 57 signals and 144 levers, or handles. . . . To a layman the thing, at first sight, seems almost beyond human understanding; yet the towerman (in actuality there are five men in the place in all hours of busy operation) understands it perfectly. To aid him, an elongated map of the trackage of the Terminal, aglow with many tiny electric bulbs, runs down the top of the machine. . . . With the assistance of this map, he plans the course—the open pathway, if you please, of every train that enters or leaves the upper level of the Terminal. He clears that pathway with his tiny levers, the lights on the animated map change as the real lights they represent are that instant changing. . . .



THE TOWERMAN IN HIS TOWER

prepared for it by the towerman in his tower at the exit gateway of the upper level of the Terminal.

The First Century started out from platform-track Twenty-seven of the upper level of the station. A light just ahead of the "1174" turned from red to yellow and that was signal for the start. A gently curving switch was opened to the "main" and the "1174" with the First Century followed that, slowly and easily. Other lights turned from red to yellow, other switches opened and closed. The First Century made its silent way over and upon them. "Yellow," said the engineer at each friendly signal. "Yellow," repeated his fireman after him. "Yellow. . . . Yellow. . . . Yellow. . . ." All the time.

There are no green lights at all in this vast subterranean place, whose forest of steel columns are upholding the busy streets and the skyscrapers of the very heart of the life and bustle of the island of Manhattan. Green in modern railroad signal parlance, as every schoolboy already understands, is the indication of absolute safety, of the open road and full speed ahead; but yellow is "caution," much reduced speed and the ability to stop the locomotive, if need be, within a very short distance indeed; and red, forever, is "danger . . . stop . . . instantly."

There are no green lights among the shadows of the yard, because this is a place for eternal caution, only yellow lights. Ordinarily, no danger, not the slightest; but always, caution. . . . So the First Century feels its way like a cat making its cautious pathway out along a fence top.

Forty-eighth Street. . . . Fiftieth. . . . The gleam of the lighted windows of the Fifty-first Street Tower. . . . Fifty-second. . . . Now it is that the yard narrows—abruptly. . . . This is its real "throat"; thirty-five tracks coming sharply down to four main-line tracks in the

tunnel; of these, two, ordinarily, are reserved for outbound traffic, the other two for the inbound.*

Two-forty-eight!

A green light flashes ahead in the dusky maze of the terminal yard.

The end of the terminal yard and the beginning of the main line. The engineer of the "1174" brings the handle of his controller slowly to full speed; engine and train together quicken pace. . . . The final switch is passed. . . . Straight line ahead. The engineer has a moment to explain some details of his control mechanism. The fireman turns away for a moment. . . . You may have wondered why they have a fireman on an electric locomotive. Now you know. There is a genuine fire in it—an oil-fired boiler, that supplies steam to the rest of the train, at a uniform pressure of 120 pounds to the inch. The name, "fireman" for the second man really is but a name—the survival of a tradition in the honorable and well-established profession of railroading.

Two-forty-eight-fifty. . . . The first green light safely past—now already behind the Century, it quickly changes to a sullen red.

They have a meticulous habit—these operating men—in these beginning, crowded miles of New York Central of splitting their minutes into seconds—just as they do at horse-races. It makes for the high precision of the opera-

*In the morning "rush hours" the volume of outgoing trains is appreciably reduced and one main-line track is sufficient for despatching them. The other "outbound" is used for returning the equipment of through passenger-trains to the Mott Haven yard. . . . In the evening when the outgoing passengers come to a flood tide, not less than three of the four main-line tracks are used for outbound trains. Signal indications are arranged to meet the necessities of this flexible traffic plan.

tion. The engineer's keen eyes, when they are not upon the line ahead, are upon his finely adjusted watch. It talks to him in fractions of a minute. . . . At each white mile-post you will see him tugging at it—checking his progress by it. These skilled and veteran enginemen come after a time to really know speed—a sort of sixth sense in their profession. By the motion of the train, by passing objects of every sort, they can tell you, with an uncanny precision, just what rate their locomotive is making at that very moment. They need no speedometers. They are, themselves, human speedometers, adjusted to a delicate working, indeed.

Two-fifty.

The First Century is well above Seventy-second Street. You know it because up here they have not yet closed the open spaces that were put in the tunnel for light and air when it was first builded—more than a half-century ago—and the sunshine comes streaming down upon the rails of the center tracks. From the engine-cab you catch quick glimpses of high apartment houses, towering many stories above Park Avenue—today the very "smartest" of all residence streets in great New York.

Two-fifty-one.

The First Century, at last, is out of the tunnel and running its way over the mile-long viaduct through Harlem. At two-fifty-five, One Hundred and Twenty-fifth Street and its busy local station are passed—without the Century even hesitating. . . . Neither does it hesitate at the Harlem River Bridge—the green lights assure that the draw-span is safely closed and all is well ahead.

UNDER TWO OF NEW YORK'S BEAUTIFUL GREAT ARCHED SPANS OVER THE HARLEM

Mott Haven is passed before three o'clock—and the Century has turned abruptly to the left; the tangle of main-line tracks to the right are those of the Harlem Division of the Central and of the New York, New Haven and Hartford Railroad. . . . The engineer settles down to his run. The ticklish portions of it—if ever you might even call them ticklish—are past. . . . This is easy running—and charming. Now the Harlem River is alongside. . . . And now the Century is dipping under two of New York's most beautiful great arched spans over that stream—the remodeled High Bridge and the Washington Bridge.

And now the Harlem is past and it is the Hudson—one of the majestic rivers of all this beautiful world—that is closely alongside. The railroad has ceased its long and sinuous curves—easy straight stretches are more and more frequent and with busy Yonkers well past, the man in the engine-cab brings his train to the full speed of fifty-five miles an hour allotted him along here.

New York in urbe.

Fashionable towns, accessible towns, romantically lovely towns set at the river's edge and following one another in quick succession—Dobbs Ferry, Irvington, Tarrytown, Ossining. . . . The Century does not halt, even for a moment, at any of them. She overtakes and passes a local on a parallel track that is making all these brisk ports of call. . . . An earlier local has garnered passengers for it at many of them. These will be delivered at Harmon—just four miles north of Ossining and thirty-three miles distant from the Grand Central Terminal.

◆ ◆
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"HUDSON" TYPE LOCOMOTIVE – "5273"

ONE OF THE HIGH-SPEED LOCOMOTIVES REGULARLY HANDLING THE CENTURY FROM HARMON TO CHICAGO

◆ VIII ◆

HARMON is a New York Central-created community on the bank of the Hudson. It came into being chiefly because it afforded the most logical point for the outer rim of the electric zone of the Grand Central Terminal and the consequent change between the steam and the electric locomotives of the road. For as busy a railroad as this, such an interchange point, of necessity, meant plenty of elbow room. . . . Room not merely for widespread sidings and yards, but roundhouses and repair-shops and all that with them go. . . . At Harmon such room was available. And some twenty years ago it came into its very active existence.

Here rests the first squadron of the fleet of swift steam pullers that are to haul the Centurys from the ken and prescience of great New York on its flight to Chicago. At noon they still are standing in the roundhouse.

This roundhouse is by no means the largest on the system—although it has thirty-one tracks radiating from its hundred-foot turntable. Yet this cleanly widespread building, whose shape, if we could pass over it in a plane, would be like that of a segment of a giant pie, is most impressive. It is quite large enough for the task imposed upon it. It may have thirty-one tracks, but in the course of even ordinary flows of traffic it handles from eighty to ninety of the largest sized steam passenger-locomotives in a single twenty-four hours. . . . A roundhouse such as this is neither a hospital or a home for locomotives. . . . Locomotives cost money—today, a great deal of money. Each hour that they stand idle, the interest charge on that money runs straight ahead—like the ticking of a clock—and the locomotive itself is doing whatsoever to justify that charge. . . . So the trick in the roundhouse

is to get the engine in as quickly as possible and out again —also as quickly as possible. . . . Yet by no means neglecting the work to be done there. . . . For the roundhouse period of the steam locomotive's routine is, ordinarily, by no means a rest period. It is a time for inspection, regeneration, fresh inspection.

Here is a big "5200" type*—the "5273"—that brought an incoming Century into Harmon this morning—at Harmon turned it over to an electric, for the final thirty-three miles of haul into the Grand Central. . . . It then backed its way into the roundhouse area.

Its first stop there was at the coal chute, where it filled its tender with fuel for the return trip and also sand for its sand-box (against the eternal possibility of bad weather and slippery rail). It went next to the ash-pit, where its ashes and live-coals together were dumped, its firebox left as clean as the proverbial whistle.

Then to the roundhouse, itself.

Enough steam still remained inside the "5273" to bring it onto the turntable and, after this device has been

*The "5200s"—the "Hudson type" locomotive, are the pride of the New York Central, today. Upon the parent road alone, some one-hundred and fifteen of them are employed in high-speed passenger service, there are fifty more of them upon the other roads of the New York Central Lines family.

The Hudson type from stem to stern is 96 feet in length—one of the longest passenger-locomotives in use anywhere. It is of the 4-6-4 type of wheel arrangement and it has, running free upon the line, a tractive power of 42,300 pounds. For starting purposes, it uses the wonderfully ingenious booster, and with the aid of this device attains an initial tractive power of 53,200 pounds. In less than a minute it can gain a speed of 17 miles an hour.

Its six huge drivers are each 79 inches in diameter; its cylinders, 25 by 28 inches. It has all the modern appliances of high-grade, high-speed locomotives, boosters, stokers, superheat, feedwater heat, mechanical reversing and lubricating devices. With all of these, and its great tractive power and energy, the locomotive weighs over 630,000 pounds. 351,000 pounds of this is in the engine itself, the rest in tender which has a coal capacity of 24 tons and a water capacity of 12,500 gallons.

moved into the right position, into the waiting roundhouse track of "stall" assigned to it.

Curious, how these old stable terms still persist!

When the engineer who brought the "5273" on her incoming trip from Syracuse had seen his charge safely uncoupled from its train and had made a brief personal inspection of it, he turned it over to an "hostler" with a written report of its performance upon the down run and notations as to any defects in the machine. . . . It was this hostler who took it to the coal-chute and the ash-pit, finally to the waiting stall in the roundhouse.

For its brief stay in the Harmon roundhouse there was a definite program.

First, inspection.

And no casual inspection this. Ten or twelve skilled men going over every part of the engine, making careful note of its condition. Each man a specialist. Here, for instance, the boiler inspector. His job is by no means a casual one. Before he is done with it, on each incoming locomotive, he must climb into its firebox and with his electric torch make minute examination of every stay-bolt and flue and tube. . . . The machinery inspector goes down the one side of the engine from coupling to coupling, and then up the other. Wheels, tires, loose bolts, loose mechanism of any kind are the objects of his search.

For each man, his particular job. . . . The electrician looking after the lighting and the train-control; the air-brake inspector his own sort of device; the "appurtenance man" the injectors, the stokers, the coal-pushers, the water-glasses and all the other delicate mechanism within the cab. Experts and their assistants all around the engine

and on top of it and even two men in the long bricked pit underneath looking up at the grates and its other mechanisms, ordinarily quite hidden from plain sight.

These men have the engineer's report of possible defects in the machinery as their first guide; under their strong lights and their expert eyes, they may discover still other defects—the pound of a steam locomotive over two hundred to six hundred miles of track is, of itself, a devastating sort of thing.

The most of these defects are probably minor. Most of them can be adjusted or repaired by the tool-kit of the examiner, himself, or by his aide. If not, other and expert workmen are at his command. And there is apt to be no delay in the return of the engine to active service.

This is the regular and compulsory daily inspection of every steam locomotive upon the New York Central at each end of every run that it makes upon the Lines. More elaborate inspections come at less frequent periods. Each ten days, for instance, every boiler is carefully washed out with soft water, almost at the boiling point. Each month there is not only the washing, but a special test and inspection is made of superheater units, cylinder packing—staybolts are hammer tested, various valves reground—and the like. After each three months of service all the rods are removed and then painted and hammer-tested for the slightest indication of a check or fracture. Bushings, pins and other parts which show such signs of wear that may become excessive before another quarter period, are wholly and entirely renewed. These are precautionary measures for the prevention of failure on any part of the locomotive due to service wear. And each year each engine is sent to the "back shop" and there it, literally, is torn to

pieces, and rebuilded—and all in a space, ordinarily, of about twenty days.

More than three hours before the outbound First Century is due to arrive at Harmon, they have again alighted the fires in the "5273." So good is her draught that a bushel of shavings underneath a fine layer of coal does the trick—easily and quickly. The flame runs quickly the length of the firebox as if it all was tinder. In the meantime, the boiler has been filled with soft water, already heated almost to the boiling point. With the result that within thirty minutes, the "5273" has enough head of steam so that it can easily move itself. . . . This generally is about 120 pounds to the square inch, or a little more than half (225 pounds) of the pressure that is required for regular road service. It is important that there be enough steam not merely to move the engine, but to operate it on its way, even ever and ever so slowly, for without a power adequate to apply its brakes and stop it, quickly, if not instantly, trouble might come, very quickly.

So there are "air-tests" by the hostler, before he ever opens his throttle. If satisfactory, the "5273" moves once again. Finds its way cautiously to the turntable and then —in due time—off that bridgelike device and on to the long loop track that stretches over the main line of the railroad and down into Harmon station, there to rejoin it once again.

. . . Over this loop track the "5200s" slowly make their progress. Finally they come to a full stop, in a designated position, just outside the station. The road-engineers and their firemen have reported at the roundhouse long ere this—have made their own swift inspection of the mechanisms that they are to handle out upon the line. . . An

LONG-SPOUTED OIL CANS ARE POKED
INTO THE INTRICACY OF THE MACHINERY

inspection which, seemingly, never is quite finished. As they await the incoming fleet of westbound Centurys they still are tinkering at their engines. Their long-spouted oil-cans are poking their inquisitive noses here and there and everywhere into the intricacy of the machinery.

◆ IX ◆

HARMON. . . . Three-thirty of a lovely October afternoon.

A fine black speck, steadily increasing in size, shows itself away down the Number One track, toward the South. All the while it grows larger. It is the First Century. Two minutes later it pulls into Harmon station. The electric locomotive that has hauled it up from the Grand Central Terminal, the "1174," thirty-three miles away, uncouples itself, quickly and easily, and slips into a siding straight ahead. There is a click of switches. . . . "5273" backs into place. Almost in less time than it takes to write it here, she is coupled to the waiting first section. Some one up the track gives a signal. A green electric bulb straight ahead gleams in friendly welcome. Engineer "Bob" Bentfield pulls out his new-fangled throttle—just the least little bit. "5273" catches the rail, very gently, very firmly. . . . The Century is on its way again. Bentfield's hand moves again. The throttle opens, ever and ever so slightly, the finest fraction of an inch. Momentum is being gained.

Fifty-two-seventy-three—Hudson type and ninety-six feet in ength—is about the last word in steam locomotive mechanism. Seemingly, all that the inventor and the maker can possibly do has gone into her production. No finer engine turns her wheels—anywhere. Yet "5273" is nothing more than an inert mass of metal, although boiling with energy, without Bentfield—or one of his sort.*

Bentfield is as an American a product as the Twentieth Century itself. He was born and bred and trained in New

*For rather obvious reasons, the *real* names of engineer or fireman are not used here. *Bentfield* and his fireman may or may not be recognized. As a matter they are composite—typical of all the high-grade men who help run the Century.

York Central country. Before him, his father was a famed engineer. As a boy, Bentfield can recall seeing the trains of the old Hudson River Railroad making their way up and down the valley. As hardly more than a boy he came to the employ of the railroad. For forty-six years he has sat in the cabs of its locomotives. He has come to know the very "feel" of the creatures. Useless to tell him that a railroad engine is not human. Bentfield knows better. He knows their moods—their occasional weaknesses, their overwhelming strengths. And he has learned to meet these moods.

Three-thirty-five is the precise moment set for the First Century to pull out of Harmon. Albany, 110 miles away, is to be reached at 5:38, precisely. One hundred and twenty-three minutes for 100 miles does not permit of much loafing along the line.

The Century never has pretended to be an extraordinarily fast train—its fast 20-hour run between New York and Chicago (960 miles) each day is accomplished chiefly by keeping steadily at it all the while, rather than through occasional bursts of excessive speed. The average rate of speed for this run is at the rate of 48.3 miles an hour, including stops. Excluding stops, the rate is 52.2 miles an hour—a steady and continuous gait. The fastest running is done on the long straight stretches west of Buffalo. Here on the historic Hudson Division, gently curving as it finds its way through the Highlands, there is a maximum speed limit set for all passenger-trains; arbitrarily, at 65 miles an hour. The Century is no exception to the hard and fast workings of this common-sense rule.

"This engine could go a hundred miles an hour with

this train—easy—if only we had the chance," says Bentfield.

It is not going to get the chance. Bentfield is far too good a railroader to break the rules that are set down for the protection of him and of his fellow workers. . . . With sixty-five miles an hour set as his arbitrary maximum speed, it means that he will have to watch carefully, every minute and every fraction of a minute allotted him to bring the train up to Albany. In the narrowest part of the *impasse* of the Highlands—just north of Breakneck—they are just now engaged in completing part of the very difficult four-tracking of the division. Work-trains and steam-shovels and hundreds of men are employed in cutting a wider pathway for the railroad through the hard rock of the mountains. And while these men and all of their bosses know that the daily flight of the Century is a thing never to be trifled with, delays do occur. There are "slow orders" along this part of the run; places where the swift Century must cool its heels and move sometimes at a leisurely pace of a mere twenty miles an hour, or thereabouts. Which means that Bentfield must take many glances at his watch; and in his mind use quick mathematics to figure out how he can regain the time lost—without exceeding that arbitrary 65-mile-an-hour limit.

There are, also, between Harmon and Albany, three of the track-tanks, where the eternally thirsty "5273" will drop a scoop and (literally) pick up hundreds of gallons of water. Without materially slacking its speed. Yet actually slacking it. Bentfield's orders are again imperative. He must not pass over that 1800 feet of track-tank in less than twenty-seven seconds, or at the rate of about forty-five miles an hour. Here again is an arbitrary rule. There is a similar one (of twenty miles an hour) where the road makes its double curve around the base of the stout bluff where the city of Hudson has stood, these many years.

. . . All of these are handicaps against Bentfield. He has to make reckoning of them, in advance. In addition to which, any day, every day, the eternally unexpected may confidently be expected to come to pass. There is more headwork in being the engineer of a fast express than the layman ordinarily can understand.

In modern American railroading, especially upon busy main-stem railroads such as this exceptionally busy main line of the New York Central, the old-fashioned train despatching system, such as obtained for many years, has been abandoned. Instead, the trains just move. Their engineers keep sharp eye upon the signals—both those of the interlocking type (which guard the yards and other points where there are switches and crossover and other operating intersection to be carefully protected all the while) and those of the so-called "blocks." These last are at intervals of approximately one mile apart all the way from New York to Chicago. They mark the blocks within which no two trains may be proceeding at the same time; save under caution. In actual usage they mark two of these blocks. The light upon the signal post shows whether the track in the very next block is clear, or occupied: If yellow, it is clear to the next block; if red, the block is occupied.

In modern signal practice, here in the United States, green is the light that indicates safety, while a yellow light calls for caution and a red light instantly denotes "stop" and demands the immediate halting of the train. So when the post at Bentfield's side of the track shows, let us say, yellow, he knows that the mile of track-block just ahead of him is clear and he may run into it; but that there is a train running ahead of him on the second block ahead and

ORDERS BEFORE LEAVING HARMON

he must keep a sharp watchout for it and be prepared to stop at the next signal. Ofttimes, as he comes close to the target, its light changes from the cautious yellow to the friendly green. In these minutes you can feel the slight thrill with which the "5273" once again picks up its accustomed gait.

Before he left the Harmon terminal Bentfield received the telegraphic train order—in railroad parlance a

"Nineteen Order"—which gave him formal authority to proceed with the first section of the Century. It read after this fashion.

> Conductor and Engineman of Engine 5273.
> Will run as Second Thirty-seven Harmon to Albany.
>
> G. H. W.

This brief message written by hand on a bit of tissue "flimsy" and signed by the initials of the superintendent of the division is all the authorization that Bentfield needs. . . . It will be noticed that he moves as a second section of Thirty-seven, not as the first section of Twenty-five, which is the official number given the westbound Century on all time-tables. There is good reason for this:

These early sections of the Century ofttimes run a little ahead of their announced schedules. They are apt to arrive at the La Salle Street Station in Chicago all the way from ten to fifteen minutes ahead of their scheduled times. These omit some of the few intermediate stops (stops to take up Chicago passengers only) at Albany, Utica, Syracuse, and Rochester.

It is the final section of the Century, however, that omits none of these cities. It carries the mail-car and it adheres strictly to the printed schedules; to the very minute. Also, it adheres strictly to all of the advertised stops. Persons boarding the Century for Chicago at any of these intermediate places are booked on the final section; no matter how many sections may be scheduled on any given day.

All this while, and "5273" is steadily at it. Now the long string of towns, big and little, that line the Hudson shore and are, in reality, the outlying suburbs of metropolitan

New York, are past. . . . The Century is beginning to enter the Highlands. There is swing and curve past ancient Peekskill—and the long twelve-car train is swinging its sinuous, snake-like body into the very heart of the mountains. Over across the Hudson, at this sharp bend of the stream, is Jones Point. Next comes Anthonys Nose, right above the "5273's" cab. While on the west bank of the river there is a temporary recession of the high hills. Flats show themselves and there is an island—Iona Island—almost entirely filled with the munitions supply storage of the Navy and displaying signs warning aviators not to fly over those secluded acres. . . . At the rear of Iona Island is the well-famed Bear Mountain Park, extending for several miles inland and giving metropolitan New York such a nearby wilderness for a playground as few other great cities in the world possess. The nearest approach to it is possibly the Wienerwald, in the outskirts of Vienna.

It is from a picturesque old Dutch figure of local fame, Anthony Van Corlear, that Anthonys Nose gains its name, but the traveler up the Hudson, today, is not apt to think of that. His mind becomes rivetted at the first sight of the great suspension bridge that, literally, springs from the nose of the promontory, to thrust itself in a graceful curve to the upper reach of the Bear Mountain Park, directly across the river. It is a highway bridge, and, as yet, the only highway bridge to span the Hudson below Albany.

The Century does not linger at it.

On the contrary, Bentfield pulls out "5273's" throttle another fine fraction of an inch, engine and train crouch and spring through a tiny tunnel in the nose of the moun-

tain, and the fine feathery fabric of the bridge is left behind. Now the flats are on the east bank of the river, while the west shore rises, sheer and forbidding, above the water. There is barely room at its foot for the double-track of the West Shore Railroad (today a portion and a secondary main-stem of New York Central); at times no room, whatsoever; and the track must either tunnel underneath the rock or else be carried by bridge spans outside its sharply perpendicular edge. . . . Atop of the ledge there are many interesting structures; some summer homes (amongst these, the comfortable old-fashioned house of the late J. Pierpont Morgan, of New York), the dramatically located Ladycliff Academy, and—most imposing of all—the great group of greystone structures that make the West Point that all America knows—and loves.

This is not a guide-book to the natural beauties of the valley of the Hudson, or elsewhere along the main-line of New York; this is the narrative of the daily flight of the Twentieth Century over that selfsame main-line; of "5273" at its task, and Bentfield at the helm of the "5273." . . . Bentfield worrying a bit as the train leaves Anthonys Nose and settles down for five miles of comparatively straight running past the Highlands before slipping around the nose of Breackneck for once and for all. For it is right in here that the work-gangs are widening the line. Here it is that there are the "slow orders," the constant possibility of interference by the workmen or their trains. . . . Bentfield looks at his watch constantly. He knows just how much time he can afford to lose in here and just how much time cannot be lost—and regained—before Albany; still keeping within that rigid 65-mile-an

hour limit. . . . His brow knits a bit at the succession of red and yellow lights, but his hand grips the handle of the brake. Orders are orders. And Bentfield is the last man to forget that.

Yet, even if Bentfield did forget, there is something else that cannot forget. And that something else completely overrules Bentfield—or any other man in an engine-cab.

That something else is the unseen hand upon the throttle—the automatic electric train-stop, that is America's latest gift to the safety of railroads, the whole world over.

It is not germane at this moment to go into the fine details of this truly remarkable new device. It, perhaps, would be enough merely to say that each mile of the main-stem of the New York Central Railroad from New York to Chicago is now protected by it; not only these 960 miles, but an additional 713 miles of main-line trackage on the system; forming, all told, one of the largest installations yet made upon a railroad, anywhere, (4766 actual miles of track) and representing more than thirty per cent of all the track as yet so equipped within the United States. In addition to which the automatic train-stop control is completed by the necessary complementary apparatus upon 2025 New York Central locomotives; without which the device would not be able to function.

For it is this last mechanism (upon the locomotive itself) that actually stops the engine in case the engineer ever should forget and overlook the red signal and attempt to run past it. Then and there, he loses control of his engine. Then and there, it is the unseen hand upon the

throttle that asserts itself. No idle phrase, that. The electrical device, technically termed a receiver, mounted on the engine tender, and which rides so close to the edge of the rail, is in the jargon of the electrical engineer "choked" or made inoperative when signals indicate proceed, and operative when signals indicate stop. This choking effect is transmitted electro-magnetically to the electrical device on the locomotive when it passes over the device mounted on the ends of the ties 70 feet from the signal. The choking is caused by the electrical device on the locomotive in close proximity with the electrical device on the ends of the ties.

When choked no inductive effect is transmitted to the device on the locomotive. However, when the device on the ends of the ties is not choked as the receiver passes over it, a sudden change in the electrical circuit passing through the coil on the device on the locomotive is set up and this at once applies the brakes. Stoppage of the train is thus rendered complete immediately.

For twenty-four years prior to the adoption of the present device (in 1927)—or eighteen years before the Interstate Commerce Commission issued its ukase, beginning to order it in upon the railroads—a special engineering committee of New York Central studied into the possibilities for such a device, made practical and unfailingly efficient. In those twenty-four years, many hundreds of plans were examined and tested—in all more than a million dollars was expended in research work—before the present apparatus was finally perfected and put into service; with 905 automatic block signals—and at each one of these the automatic stopping device—between Harmon and Chicago. . . . The cost of the automatic stop installation on the New York Central up to the present time is $4,631,000.

Red lights change to yellow; yellow to green. Bentfield's face lightens. That good record of his into the Albany station is not to be imperilled after all. There is another of those little fine thrills as "5273's" heels take fresh grip upon the rail, and engine and train come out of the short tunnel at the foot of Breakneck. . . . Not so many curves, now. Good, long tangents—and many of them. But the river still to be closely followed for many and many a mile. That phrase, "water-level route," used so steadily by the Central in its advertising, is much more than a mere phrase.

Overstream there is the brisk city of Newburgh. Two ferryboats, that go back and forth to make connection with the trains of the Hudson Division at Beacon station, are passing in the middle of the river.There are other water craft about. In the long season of navigation the Hudson is never an idle stream. Huge white steam-boats make their sedate way upstream and down, by day and night. There are many smaller boats. Sometimes, they are clustered together—huge families of slow-moving barges, hauled by puffy small tugs of really great power. Forever, they go their own way. Rarely are they long idle.

New Hamburgh is past, so quickly that one is hardly aware that there is a tunnel at all. Comes the romantic sounding Camelot, with its unromantic stone quarries and another of the track-tanks, where the "5273" scoops up a long drink without materially halting its speed. . . . Bentfield does not frown at this delay. He is ready for it. . . . And he knows just how to allow for the precious seconds lost—seconds, each of them to be regained. . . . Now Poughkeepsie.

Poughkeepsie; marked to Century riders chiefly by a long swirl of station platform and, overhead, the graceful creation of its high-set bridge that carries a double-tracked railroad directly over the Hudson and that was

for many years the only bridge over the river south of Albany. . . . Poughkeepsie past, and then Hyde Park and then Staatsburgh. The sun sinks lower still. But there is still light enough, reflection enough from the placid surface of the river to illumine one of the most perfect stretches of railroad line to be found anywhere. Four tracks wide—for the most part straight and, when curving, curving but slightly—stone-ballasted, wide-set, this is a railroad representing more than eighty years of loving care and careful attention. It has been said that over this Hudson Division more than twenty-five per cent of all Americans pass at some time or other in their lives. The record shows that in an average year more than four million persons ride up and down this division, all the way between New York and Albany. For the movement of such an army, it is worth while keeping up a perfect track. Yet it would only be good railroading to maintain such a high degree of efficiency even on a track with a far lesser density of traffic. And this is precisely the New York Central way of doing things.

Lower still sinks the October sun. . . . Now it is beginning to lose itself somewhere behind the ranges of the Catskills, which begin to show themselves; first, off toward the northwest, then almost due west. . . . Lights are beginning to show themselves in the buildings of Kingston, off on that opposite shore; dusk settles in the cab. Rhinecliff passes. The Century does not slacken its speed. . . . The sun, at last, sets—its final rays silhouette the mountains until their rims appear knife-edge against the sky. The houses in Saugerties and Catskill are all alight now. . . . There is another track-tank and another drink for the "5273," a rattle, and a roar and Hudson—

on the east bank and perched right above the track and train—is left behind.

At the right of the line, the October moon rises, sends soft silvery shadows here and there and everywhere and outlines Bentfield's profile clearly to his fireman, seated across the way from him. In other days, it was not always thus. In other days, the fireman was not so often seated. That was before the coming of the locomotive stoker; that highly ingenious device by which the coal is kept in almost a constant procession from the tender to the eternally hungry firebox of the "5273". . . . In the cab, the stoker shows itself as two slender barrel-like cylinders, poised in the angle of a huge "V" whose interiors consist chiefly of two constantly turning worm-screws, which lift the finely broken coal right up toward the top of the firebox. At the last moment, a steam-spray forces the coal in an even stream to each and every corner of the fire.

The fireman's job is simplicity itself. For the most part, he sits upon the left of the cab, keeps the stoker and the feed-water supply in constant adjustment and either reads or repeats the signal indications—depending chiefly upon the position of the signal, and the engine.

"Green," says Bentfield.

"Green," repeats Kershow, the fireman.

And again.

"Green," says Kershow. . . . This time the curve is so placed that it is the fireman who catches the first sight of the signal target.

"Green," repeats Bentfield, in confirmation.

So goes the report back and forth across the cab, for all the way to Albany. Occasionally, Kershow climbs down from his perch, takes his hose and wets the coal or the cab-floor and adjusts the coal supply so it feeds more readily into the stoker, but he chooses these times rather carefully. When he knows Bentfield will not be dependent

upon him for the first reading of the signals. Kershow knows the division well. It is an essential part of his job to know the division well.

Castleton. . . . And Albany less than ten miles away. The final one of the three great bridges over the Hudson south of the capital—this, high-set structure The A. H. Smith Memorial Bridge, that carries the tracks and the freight-trains of the New York Central over the river and the original main-stem—has been passed and left high behind. Up ahead, through the willows that line the flats of the broad and shallow river, one begins to see the flicker of the lights that mark Albany. . . . They grow nearer all the while. . . . An interlocking, with its interesting tangle of signal-lights, looms up, straight ahead. It marks the entrance to Rensselaer yard—the beginning of the end of Bentfield's run. The engineer's hand comes down firmly upon the handle of the air-brakes. The Century feels the application of his authority. Slows. Slows still further. . . . Straight ahead a red turns to yellow, a yellow to green. . . . Bentfield releases his brakes. The Century accelerates—ever and ever so slightly, passes over a network of switches which mark the intersection of the Boston and Albany, in from Boston, and the line straight north to Troy and to Montreal. . . . Albany is a four-square point for rail traffic interchange—and then some more. . . . It still is, through seven or eight months of the year, an important river port, and the railroad entrance to the town from the east is across the long double-track drawbridge that long has been one of its chief landmarks.

The track and the train turn sharply to the right at the end of the bridge and into the widespread station. The

Century is running very slowly now, hardly faster than a man at a brisk walk. . . . At the end of the station platform, it is going much slower than that . . . slower . . . slower . . . slower. Then not at all. . . . The first leg of the run is over. Bentfield pulls out his watch.

"Five thirty-eight," he says, with the slight suggestion of a smile. "We're on time."

He reaches in the duffle-box underneath his seat for his kit-bag.

"You ought to keep on with the engine to Syracuse," he suggests. "It's a fine run up through the Mohawk Valley."

So it is a fine run; especially in the long days in late June when there is daylight almost all the way through to Syracuse. But this is October and already it is dark. . . . Bentfield and Kershow climb down out of the cab. The engineer greets his "relief," together they make a hasty inspection of the "5273" in the two or three minutes allotted for the stop in Albany station. . . . Over across the river in the Rensselaer yard, the second Century, which will not come into Albany station at all, but will make a wide detour around it on the former freight-bridge to the north of it, is, this very minute going through a similar process. Before the first section has started out from Albany once again, the third will have pulled in upon a parallel track just beside it. . . . Similar inspection; similar interchange of engine crews. . . . And then, almost before you are aware of it, the three Centurys are off and away again and the men who, as a part of their day's work, brought them safely up the first division, "on time to the minute" are sitting down together for coffee and a bite of supper.

◆ X ◆

OFF and away and up Albany hill. So quickly that the level line is reached and the short, stub-nosed switching engine, which acts as helper, dismissed, before most of the passengers are really aware that there has been any halt at all. . . . Then follows a long, level stretch of tangent. Historic railroad country this. For here it was that, on a memorable day in August, 1831, that very early steam-locomotive, the *De Witt Clinton*, pulled its first train, carrying many of the notables of Albany and Schenectady from the one town to the other. That is all history now. But is worth remembering that for about a hundred years this particular stretch of the New York Central has been in continuous use.

Schenectady is a blaze of light from the great electrical works there. There is a dull roar as the Century sweeps through and is past the busy town and onto the bridge over the Mohawk and off again.

This, at last, is the Mohawk Valley. At another time of year, when daylight lingers longer, there is a profusion of scenery; high hills off to the south and, in the foreground, the charming river, which in very recent years has been "canalized" and which at certain times is gay with traffic. If one looks closely through the window of the train this autumn night, he may possibly see the lights of a boat or a string of boats making their leisurely way along the barge canal.

But at six in the evening one's thoughts are more apt to be of dinner. Long since, the dining-car stewards have passed through the train with the menu-cards of the

evening meal, seeking the personal preferences of the train's guests. And the steady trek toward the dining-car begins.

Oncoming night and, in quick and steady succession, Amsterdam, Canajoharie, Fort Plain, Little Falls, the long platforms of the Utica station, Rome, and, finally, the "5273" is slowing for Syracuse.

To hundreds of thousands of travelers on the main stem of the New York Central, Syracuse means the town where the train makes slow and dignified passage down the center of an important business street, while trolley cars and automobiles and folk on foot stand aside and make a pathway for it. Soon this is all to be changed. On the completion of the new main passenger station on the north side of the city, this historic and picturesque path is to be abandoned. But the stretch down the busy street still remains one of the interesting episodes of the trip to Chicago in the westbound Century.

PORTER MAKING BED IN DRAWING ROOM

At Syracuse there is a change, not merely of engine crews, but, usually of the locomotives themselves. After two hundred and thirty-eight miles of steady running, "5273" is ready for a few hours of rest, cleaning and inspection, before her nose is turned

about and she is ready to haul an eastbound Century back to Harmon once again. . . . Hardly has the train come to a full stop in the lofty shed of Syracuse station, before they are uncoupling "5273" from the first Century. Easily she slips out of place. Another "5200" backs in and takes her place. The process is repeated for the following sections of the train. And it is all over and done with and the three sections on their way west again, almost as quickly as it takes to tell it.

Mountains and river valley are now left far behind. The unbroken four tracks of the Central now lead through the easy rolling country, the pleasant farms and the truck gardens of western New York. There are important towns and brisk ones, before Rochester is reached and passed, with only one or two of the sections stopping in its generous station to pick up Chicago bound passengers.

Now it is night itself. Porters long since have been making up the berths. And now passengers on the train are getting off to sleep upon a train where rest comes easily, indeed. Good handling, good equipment and, best of all, good track, makes sleep upon the Century an eternal delight.

It has taken one hundred years of railroading and the efforts and experience of not merely hundreds, but—literally—thousands of men to evolve this structure of wood and steel over which the Twentieth Century makes its way so softly and so easily. In the beginning, pioneer railroaders experimented with placing blocks of stone or longitudinal wooden stringers underneath their first crude forms of iron rail. Quickly, however, they came to the present standard form of steam railroad construction the world over; two, parallel, metal rails accurately spaced,

and firmly. Yet never too rigidly. And supported by cross-ties, or sleepers; these last generally of wood. . . . The standard gauge of these railroads was established, far more than a hundred years ago, at 4 feet, 8½ inches. There was a curious reason for this spacing: It was the roadway that the Romans fixed more than two thousand years ago as the most practical width for their chariot wheels. The first railroads—in England, two centuries or more ago—were nothing more than the adaptation of a roadway into a railway, by placing down two parallel lines of wooden rails in order to provide easier traction for wagons—particularly those engaged in coal haulage. This, of course, was long decades before the locomotive had even been imagined and the railway trains were merely single wagons, horse-drawn, which were taken from the rough-surfaced road and placed upon the smooth-surfaced rail. Thus it was that the spacing of the rail was adapted to the wagon axle, which had not been changed materially in many hundreds of years.

When, in due time, the steam locomotive arrived, its inventors merely adapted it to the existing horse railways. A change of gauge was the last thought in their minds; they were far too much occupied in the perfection of the machine itself to give much time to such a detail. . . . The steam locomotive brought the railroad into the fullness of its being—so quickly, that there still was little time for much thought as to the precise gauge of the track upon which it was to run.* And so, quite naturally, it

*Occasionally, there have been efforts to depart from this so-called standard guage. In this country, the Erie Railroad, with some of its connecting lines, originally was builded to a six-foot gauge and was so operated for years. In England, the historic Great Western Railway was placed at a seven-foot spacing, as early as 1837, and, not until after a bitter parliamentary fight, was it finally brought to the 4 feet, 8½ inches figure. But this was not until 1892. . . . And, today, wide-gauge tracks are still the standard in Russia, in Spain and in parts of India; while narrow-gauge tracks, all the way from 24 inches upward, have been occasionally used on steam railroads, all over the world, particularly in Australia.

remained fixed at the figure at which it originally had been established—4 feet, 8½ inches. And so it has continued to remain through all these years. Unquestionably, if the thing were all to be done over again, and in the light of present day experience and requirements, the gauge would be increased, ever so slightly; probably to five feet between the rails.

The standard track used upon the main line of the New York Central, today, is a meticulously builded and maintained structure. Upon a carefully graded roadbed, a secondary bed or cushion of clean fine rock, from 14 to 18 inches in thickness, is put down. Atop of this come the cross-ties—always, on the New York Central, of wood, carefully chosen and even more carefully treated and prepared before being placed into final position.*

On the New York Central, these ties are spaced about 22 inches, "on centers," as the track engineers like to put it. At the rail joints an extra tie is placed and this makes the famous "three-tie-joint" which is an especial feature of the road's construction and which, in the opinion of many, is a prime factor in the smooth operation of the road's passenger trains. On top of them, at right-angles, of

*The process of preparing these ties is a modern and a fairly complicated one. Two great plants on the New York Central—one at Rome, New York and the other at Toledo, Ohio, are devoted exclusively to it. In these the cross-ties of pine, beech, gum or hard maple, each eight and one half feet long, seven inches in thickness and nine inches in width, are received and, after being examined for possible defects, are loaded upon small cars, or trams, which presently are run into a huge cylinder, 136 feet in length. The cylinder is closed, rendered airtight and water-tight and then is gradually filled with a preservative liquid, in which creosote is the chief component. Air pressure is applied to the cylinder, also heat is maintained at about 175°F. . . . Literally, the cross-ties are "cooked." In an hour the combination of heat and pressure has driven the creosote into their very fibre, up to their hearts. . . . A thorough process and one whose effects are not quickly gainsaid. By it, the former average life of a railroad tie (about ten years) is at least doubled. . . . The process more than pays for itself.

course, are laid the rails. Some 3200 ties go down to a mile of single-track.

Ordinarily, these rails are rolled from open-hearth steel. (On curves, where there is heavy traffic and excessive wear, rolled manganese steel rails are often used.) In modern railroad practice in North America the rails are each 39 feet in length and on the main line of the New York Central they weigh 127 pounds to the yard, and are 6½ inches wide at the base and 7 inches high. This is known as the Dudley section. It is the standard which is now replacing the former 105-pound rails—six miles of which came to almost an even thousand tons of steel. One thousand tons of the new 127-pound rail only lays five miles of single track. But it is track just so much better adapted to the pound of the Twentieth Century and its fellow high-speed express trains.

Americans who have traveled upon the European railway have noticed that over there the rail-joints are very apt to be placed directly opposite one another in the track. This has come, apparently, for facility for reconstruction and repair, whole sections of light track being taken out and replaced by other sections which have been built up carefully at some distant work-shop or yard. . . . In the United States, the practice is almost always different. Rail-joints are "staggered" so that they never come opposite one another. This, in the opinion of our track experts, makes not merely for better riding of the trains but prolongs the life of the track itself.

To a track well laid in the beginning there is added constant inspection and maintenance. A railroad track any-

where is constantly embattled by nature—for each and every mile of its length. Only unending, eternal vigilance can maintain it at a high percentage of perfection. Storms will come and wreck their vengeance upon even the stoutest track of the modern railroad. The extremes of heat and of cold are of themselves sizeable and very difficult problems.

Every mile, every foot of main line track on the New York Central is inspected at least once each twenty-four hours. By experienced track-walkers whose eyes have become skilled to detect, not only smaller obstructions upon the track, but even defects in the rail itself. These men carry necessary tools and forever they are tightening the structure, driving in spikes or turning the bolts of the angle-plates that hold the rail-ends together. Few passengers ever see them, yet their's is a most responsible post in railroad operation. Upon their fidelity, upon their unceasing energy, no small part of the safety of the modern railroad depends.

In addition to all of this there are periodic inspections, not merely by the section-gangs, who are forever busy upon the railroad's right-of-way, but by trained track-gangs who travel up and down the line with detector-cars, electrically equipped to detect rail-flaws far too fine for the most observing human eye ever to see. The detector-car, with its delicate scientific equipment, unfailingly picks out rail defects. In which unusual case, the offending steel is immediately removed and replaced. A railroad can afford to take no chances. Eternal vigilance is indeed its motto. And extra rails are placed along each mile of its right-of-way to permit of immediate replacements, upon emergency. . . . The track is as sensitive and as vital as any other portion of the railroad—in some ways even more so than any other purely mechanical factor.

◆ XI ◆

NIGHT in truth. Buffalo reached, and passed. . . . Until recently the main passenger station of the city was not entered or quite reached by the Century, but the recent completion of the truly magnificent new Central Terminal there brings it within close reach of every New York Central train that enters or leaves the city. Its dominating tower, flood-lighted by electricity, is a landmark to those who are up late upon the train.

At Buffalo engines are changed; so softly and so gently in the middle of the night that few passengers ever are aware of the changing. . . . And once again the Century is off, making her steady miles down the flat edge of Lake Erie over one of the most remarkable stretches of railroad in all the world; straight, level ways, they are well-ballasted and well-constructed. This is, indeed, good railroad. Good men operating it. Chief of them all, perhaps, the men like Bentfield, who sit on the right sides of the locomotive-cabs and take constant toll of the signals, keep forever their eternal vigilance, remain at all times ready for the unexpected which, on the Century, rarely ever comes to pass.

West of Buffalo a whole fleet of eastbound trains is met —and passed. Swiftly, noiselessly. Swift expresses New York and Boston bound, from Cleveland and Columbus, Cincinnati, Indianapolis, St. Louis. . . . Intermediate cities, too. And then the convoy of eastbound Centurys. These trains, like ships, pass silently in the night. The sleeping passengers are unaware. But the men in the engine-cabs are alert and aware of all this—their silent greetings go from the one to the other. . . . And then the eastbound expresses are behind. And Cleveland is just ahead.

Cleveland is a huge city, fifth in America in population and importance, but it is not a regular Century stop. The train slows as it goes past the old station (just now being replaced by the magnificent Union Terminal in the Public Square, whose electric-lighted tower is another land-mark along the New York Central) and before it approaches the drawbridge on the short length of the Cuyahoga River. . . . Toledo is a stop, but only because it is a final locomotive change. The "5200s" that now take the Century will carry it right into the very heart of Chicago. At Toledo in the very early morning, dining-cars, sufficient to serve a leisurely breakfast to all the patrons of the train, also will be attached. For it is not New York Central practice to run the dining-cars through from one terminal to the other. The cars that served last evening's dinner upon the train, were detached at Syracuse. They will serve breakfast this morning to the eastbound Century. This all sounds simple and it is not. Remember, always, that there is fluctuation in the size of this train; not merely in the number of its sections but even in the length of the sections themselves. A fairly large section may easily be served by a single dining-car and its proficient crew; a long section, of say fourteen cars, is certain to need two dining-cars. So it is that the arbitrary rule is made that when any Century has 105 passengers or more, two dining-cars, placed together, are added, automatically, to the consist of the train. It is not the intention that any Century guest be kept waiting for a seat in the dining-car. The road does more: It sends the dining-car steward forward through the train to confer with the passengers, to find the time they prefer a given meal and then, as far as possible, to arrange to serve it to them at that very hour. On a well-filled train this is not always possible. But the effort is almost always made.

Elkhart. . . . Early morning. A stop for the Twentieth Century for its last change of engineer and fireman.

South Bend. The brisk industrial center of Northern Indiana, with a tremendous output of automobiles and agricultural machinery. Formerly a maze of grade crossings for the mian stem of the New York Central; but now the many parallel tracks have been elevated above the streets. . . . After South Bend, for a time, no more large towns, just gentle rolling Indiana country. Yet all the while, the growing prescience of a really great world city. The outposts of its truly vast commercial activity are Gary and Buffington and Indiana Harbor, Whiting and Hammond.

Now it is that the tracks and the Centurys fairly skim the edge of the head of Lake Michigan; the waves of that inland sea come lapping right up against the stout stone ballast of the railroad. The Calumet River is crossed on a mighty lift-bridge and for a few final miles before the Chicago terminal actually is reached, Illinois is entered. . . . Final breakfasts are being served in the dining-cars —the Lake Superior whitefish on the Centurys has a tremendous appeal to its seasoned travelers—a belated voyager is getting his morning shave in the barber's chair, the multitude of Pullman "Georges" are performing their deft manipulations. . . . The train swings in and out of the rapidly closing suburbs of great Chicago; halts for a moment at the outlying Englewood Station at Sixty-third Street (once outlying—gradually, however, the city is encompassing it and more and more it becomes an arrival and departure point for many travelers, particularly those making connections with the trains of the Rock Island System, which share its use as well as of the La Salle Street Station in the center of the city).

La Salle Street Station, Chicago. . . . Nine twenty-five in the morning.

Twenty minutes yet to Century arrival hour; but the hundred or more red-capped porters and all the rest of the station habitues know the habit that the historic train has of running ahead of its advertised arrival time—especially if it is running in a number of sections—and they are ready for the sight of the first of the "5200s" twenty minutes ahead of its announced coming. . . . The suburban rush into the station, and there is a considerable one into it, is over and parallel platform tracks are cleared for the Century's arrival. The Red Caps station themselves down the platforms. Beside them are their ingenious rubber-tired four-wheeled trucks into which the hand luggage, heavy or light, of incoming passengers may be placed and quickly trucked to the taxicab stand, the adjoining elevated railway station, or elsewhere.* The

*The present modern La Salle Street Station, replacing an earlier terminal of the same name, upon the same site, is not a huge affair to be compared with the Grand Central Terminal, the South Station, or the vast union stations in St. Louis, Kansas City or Washington. It is, however, a sizeable structure with twelve parallel platform-tracks within its handsome trainshed (recently much extended in length) and a capacity for handling a goodly number of trains and their passengers each day. . . . It is particularly favored by Chicagoans because of its accessibility. It is the only steam railroad station directly upon the Loop, which means that elevated railway trains to every part of the city, pass its doors, in addition to the fast electric railway service to and from Milwaukee, eighty-five miles to the north.

LA SALLE STREET
STATION ENTRANCE

Red Cap gives you a yellow check with his number. He will be waiting for you, wherever you desire.

Century arriving-time at La Salle Street is, indeed, a busy time—especially when the train, always heavily laden, arrives in four or five or six or seven great sections. In the cab-stand, directly underneath the trainshed, there is an assembling of "yellows" and the other taxis, the modern Parmalee buses that take long-distance passengers to the other railroad stations in the city. . . . What a contrast these last to the buses of ten or more years ago, with their three-horse hitches and their drivers, perhaps more skilled then drivers at many other places in creation, swiftly and skilfully piloting their cumbersome vehicles through the crowded streets of the Loop District!

Twelve-forty is the hour set for the daily departure of the eastbound Century. (The Advance Century leaves at 11:40.) New York is reached not later than nine-forty the next morning. . . . The running-times of the eastbound and of the westbound trains are precisely the same—twenty hours. The apparent discrepancy of two hours is due to the workings of the standard time system, as established upon our American railroads. Chicago time (Central Time) is just one hour slower than New York time (Eastern Time); the change from the one to the other is made just west of Toledo.

In the three hours in Chicago between the arrival of the westbound Centurys and the departure of the eastbound, there is hardly opportunity to turn the equipment, clean it and restock it for the return trip. (It *has* been done, on

WAITING ROOM—LA SALLE STREET STATION—CHICAGO

great emergency, but the memory of the thing is a nightmare to the Chicago railroaders.) Root Street Yard—Chicago's Mott Haven—is much closer to the passenger terminal than the real Mott Haven is to the Grand Central Terminal. And, relatively, it is much larger. For the volume of traffic it has to handle. It is equipped with dining-car and Pullman commissaries and the like. In addition to all of which it possesses its own ample reserves of every form of car and locomotive equipment. Upon emergency and demand, it can produce extra Centurys, in profusion and at extremely short notice.*

On the eastbound flight of the Twentieth Century, there is little to be said that is not equally true of the westbound.

*The work of preparing the Century for the eastbound run from Chicago so very nearly parallels the task accomplished each day at Mott Haven that it is not set down in detail here. Suffice to say the task and the responsibility are quite as great at one end of the run as at the other—the men quite as capable to meet both.

Because of the earlier departure—due, as has just been said, to the variation in standard time between its two terminal cities—it carries its dining-cars much further east; beyond Cleveland, which is reached at about ten in the evening. It serves luncheon to practically all its passengers. And affords a long and leisurely afternoon for reading or for conversation. A good many men bring their unfinished business affairs aboard the train. The train secretary and his handy typewriter are a real help to their correspondence.

The afternoon passes quickly. Even in the longest days of the year, it is dark before Cleveland is reached and 340 miles of the eastbound journey accomplished. After that, into bed for a sound sleep on the water-level route, and the next that one can possibly know is that the dining-cars are being attached, for breakfast. . . . Boston sleepers are being cut off and made into a train of their own, for the tremendously picturesque trip over the Berkshires and across almost the full length of Massachusetts, down to the economic capital of all New England.

The morning trip down the Hudson does not yield in picturesqueness, however, to the journey over the Berkshires. All the way south from Albany, it continues to gain in interest. At eight or thereabouts the Century is threading the narrow passageway that aeons ago the Hudson worked for itself through the stout barriers of the Highlands. . . . Harmon is reached at eight thirty. There is a quick change there from the steam to the electric locomotive—the big "5200" goes trundling its way off to the roundhouse and its bath, like a sleepy small boy at the end of a hard day's work. . . . In five or six hours it will be thoroughly rested, refreshed and refueled; quite ready for the return journey to Syracuse. . . . It will share its roundhouse stalls with its fellows from off the road; perhaps, one of the "8200s"—twins of the "5200s"—in from

the Michigan Central and the Windsor engine terminals. . . . And soon they will be off once again.

In the meantime the Century nears the end of her run.

The height of the morning commuter rush into the city is over, less important night-trains, from north and east and west, have discharged their passengers and have begun their return, as empty equipment, up the Number One track, to Mott Haven yards. . . . The requisite platform-tracks within the Grand Central have been cleared for the reception of the incoming Centurys—no matter how many there may be of them. Red Caps are alert and waiting. Every man of them is on duty. On a semi-military formation they are being marshalled into line and, at the right moment, they will be distributed down the platforms, so many men to the cars, Reserve fleets of taxicabs are being held in the underground reaches of the Terminal. . . . Friends, by the dozens and by the hundreds, stand just outside the train-gates.

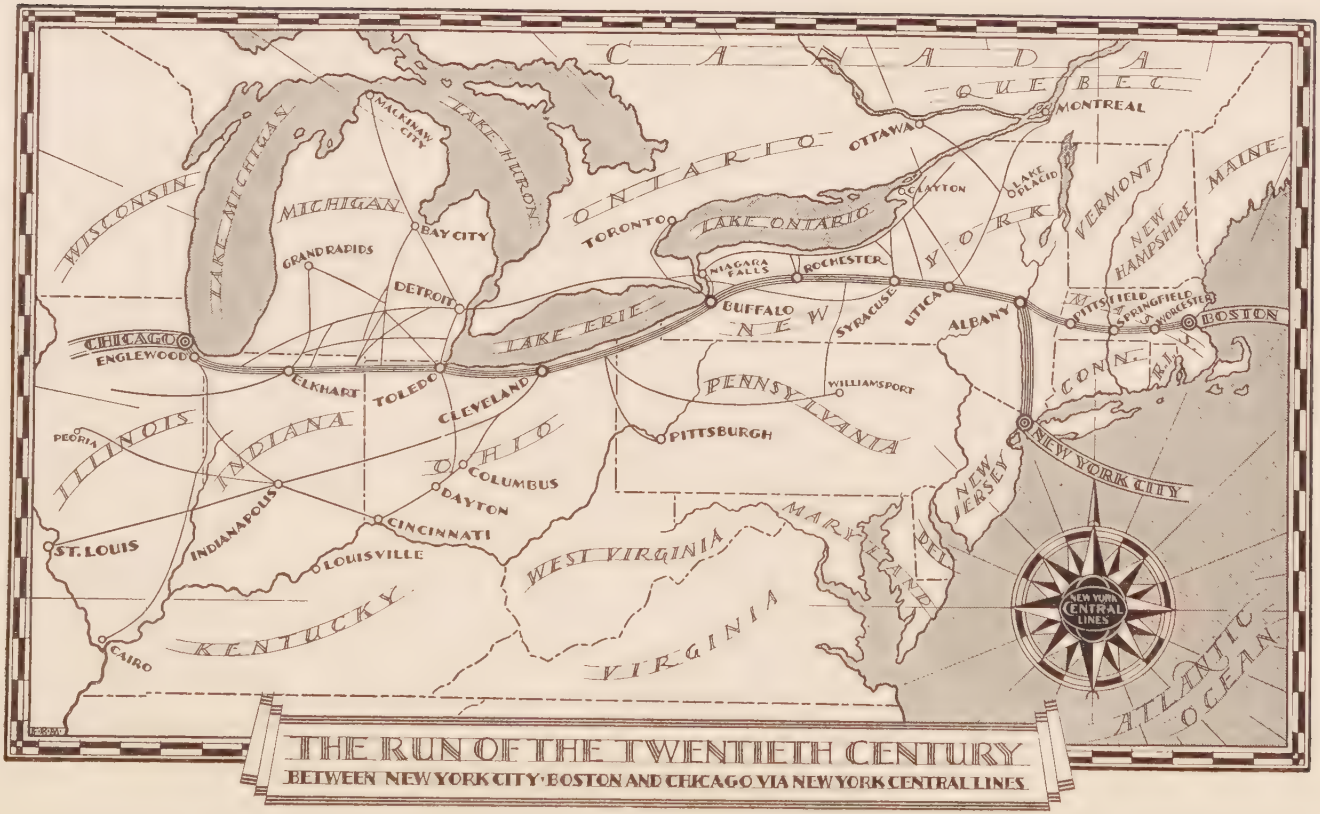
The Grand Central is again in tense suspense. Century Hour once again.

Through the shadowy distance of its underground train-shed, a bright headlight shows itself.

The First Century.

The crowd stirs itself. The Red Caps begin their march down the long platform. Slowly . . . more slowly . . . still more slowly, the tenuous train of cars comes to its final stop, so easily, so softly, that its passengers are not aware that it has ceased to be in motion. . . . A moment later they are disembarking. The run is over! Taxicabs awaiting. Friends in greeting. . . . A smooth journey and a safe arrival.

A few minutes later and the Centurys, one at a time, are being backed out of their places. Their observation cars being cut off—and so their club-cars; all of these to be turned. None of the rest of the train to be turned. For drawing-rooms and compartments are to remain facing the Hudson side of the track. Do not forget that. The railroaders are not permitted to forget that. . . . As the dismantled and beheaded Centurys are being hauled back toward Mott Haven, after a fresh and a completely satisfactory performance, their crews are packing up their personal belongings. The most of them stay with the trains until they are received and stowed away in the storage yards. Reports are to be made of the run, soiled linen and extra supplies of every sort are to be turned in and receipted for. . . . All in good order. . . . The exit of the Century is almost as dramatic as its inception.



THE RUN OF THE TWENTIETH CENTURY

BETWEEN NEW YORK CITY · BOSTON AND CHICAGO VIA NEW YORK CENTRAL LINES

◆ XII ◆

So runs the daily record of a single train upon a single American railroad. It is not always accomplished without variation. Sometimes there is much drama—unexpected drama—upon a single day's run of the Century. Storms to be breasted and conquered; the unexpected coming to pass upon the railroad. . . . Many distinguished persons favor the Century with their patronage; the record of its riders within any single year would form a veritable *Who's Who*. So very long, this roster, as to permit of no easy printing. . . . Mere bank presidents or captains of industry generally no longer make especial impression upon the Century company. Even a Hollywood star of more than ordinary merit fails to create more than a slight ripple upon its placid surface. (Incidentally, the Hollywood folk regard the Twentieth Century as one of their pet possessions. The wires from Los Angeles into Chicago constantly are a'tingle with their requests for drawing-rooms—or groups of drawing-rooms.) A member of the Cabinet, the distinguished Governor of one of the larger states may elicit recognition in the dining-car or the lounge. Distinction is too regular a passenger upon the train to longer excite particular comment.

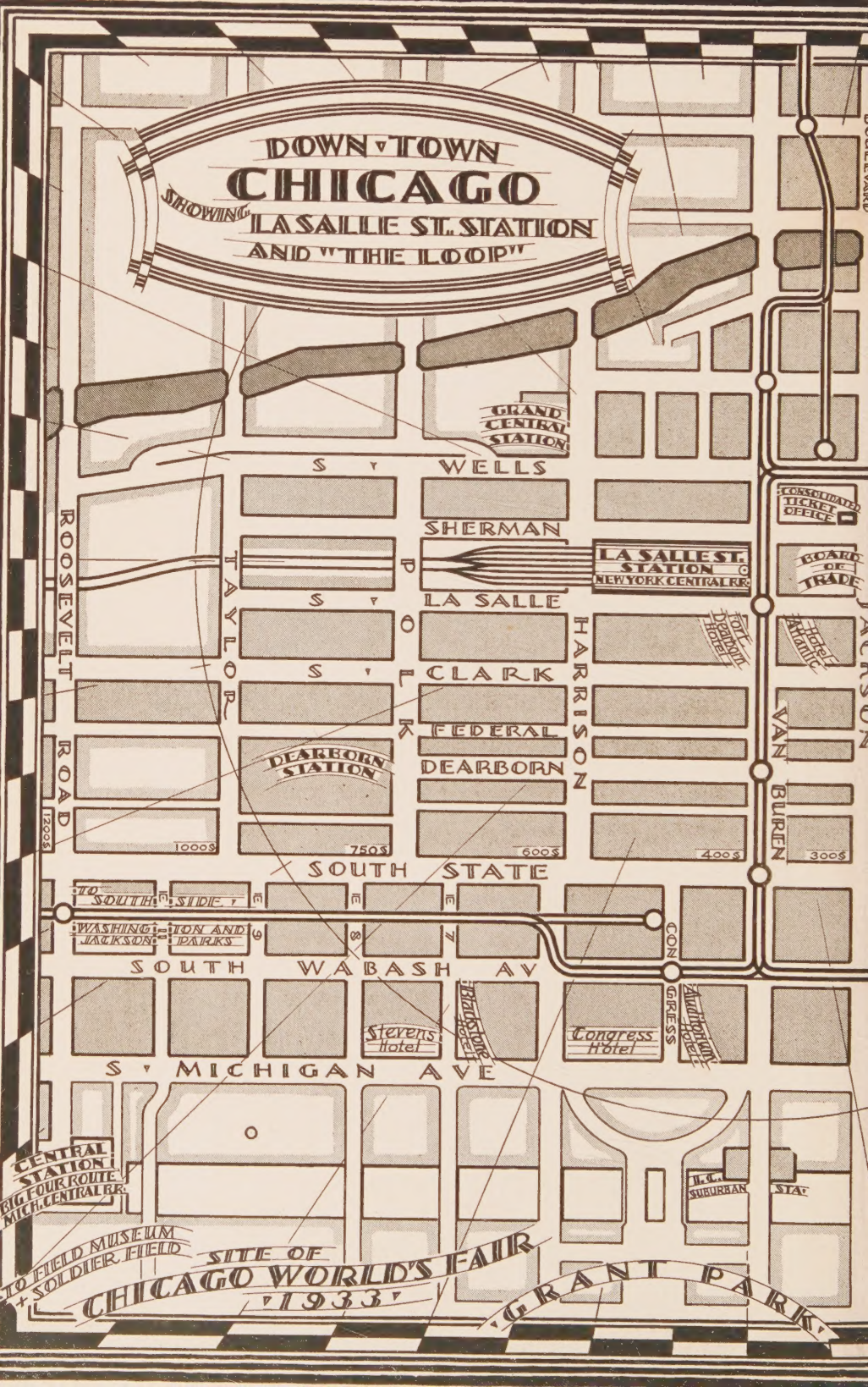
And the chief distinction of the Century after all is that all manner of prosperous and representative folk ride upon it. It is, in great truth, a cross-section of our American life today. Old and young seek it. The schoolboys and schoolgirls from Chicago and beyond flock to it in such numbers at the end of each vacation-time that sometimes a section or two is added—just for their own accommodation. And that section immediately becomes a rolling fraternity house or college social hall. . . . The Century is nothing if not adaptable.

That has been the purpose of this telling.

To show an American fast through train developed to an *n*th degree of efficiency, safety and comfort. To show its flexibility. Therein it differs—widely—from a ship. In its luxury, in the fullness of its appointments, the Century can be—and often has been—compared to the finest of the fine liners crossing the North Atlantic. But there is little or no flexibility to the ocean liner. For ten passengers or a thousand the entire great bulk must be propelled the sea. The Century can, and on rare occasion does, run in a single section—a minimum of say twelve cars. But on the other hand, in a single trip she can, and occasionally does, run in not less than seven sections, say eighty-four, or even a few more, cars. This, alone, is one of her best economic justifications; one of the prime reasons for the overwhelming financial success of the train. And if it were not financially successful, the merest novice would know that it could not long continue to run—not at least in its present high fashion.

For over twenty-eight years it has now been running. Not only running but steadily increasing its patronage. Coming deeper and still deeper into the hearts of travelers in America. Becoming more and more an institution, rather than a mere train; justifying more and more the brilliant inspiration that first placed it into service. Serving as a model for other and newer trains, but none more beloved; none swifter; none more completely equipped in every fine detail for the full comfort of he who rides upon the railroad. That's the Twentieth Century. A complete train. What more might possibly be asked of anyone?

NEW YORK
CENTRAL
LINES


DOWN TOWN
CHICAGO
SHOWING LASALLE ST. STATION
AND "THE LOOP"
GRAND CENTRAL STATION
S. WELLS
SHERMAN
LA SALLE ST. STATION
NEW YORK CENTRAL RR.
CONSOLIDATED TICKET OFFICE
BOARD OF TRADE
ROOSEVELT ROAD
TAYLOR
S. LA SALLE
CLARK
HARRISON
FEDERAL
DEARBORN
DEARBORN STATION
FORT DEARBORN HOTEL
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TO SOUTH SIDE
WASHINGTON AND JACKSON PARKS
SOUTH WABASH AV
CONGRESS
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Congress Hotel
S. MICHIGAN AVE
CENTRAL STATION
BIG FOUR ROUTE
MICH. CENTRAL RR.
I.C. SUBURBAN
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TO FIELD MUSEUM
+ SOLDIER FIELD
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CHICAGO WORLD'S FAIR
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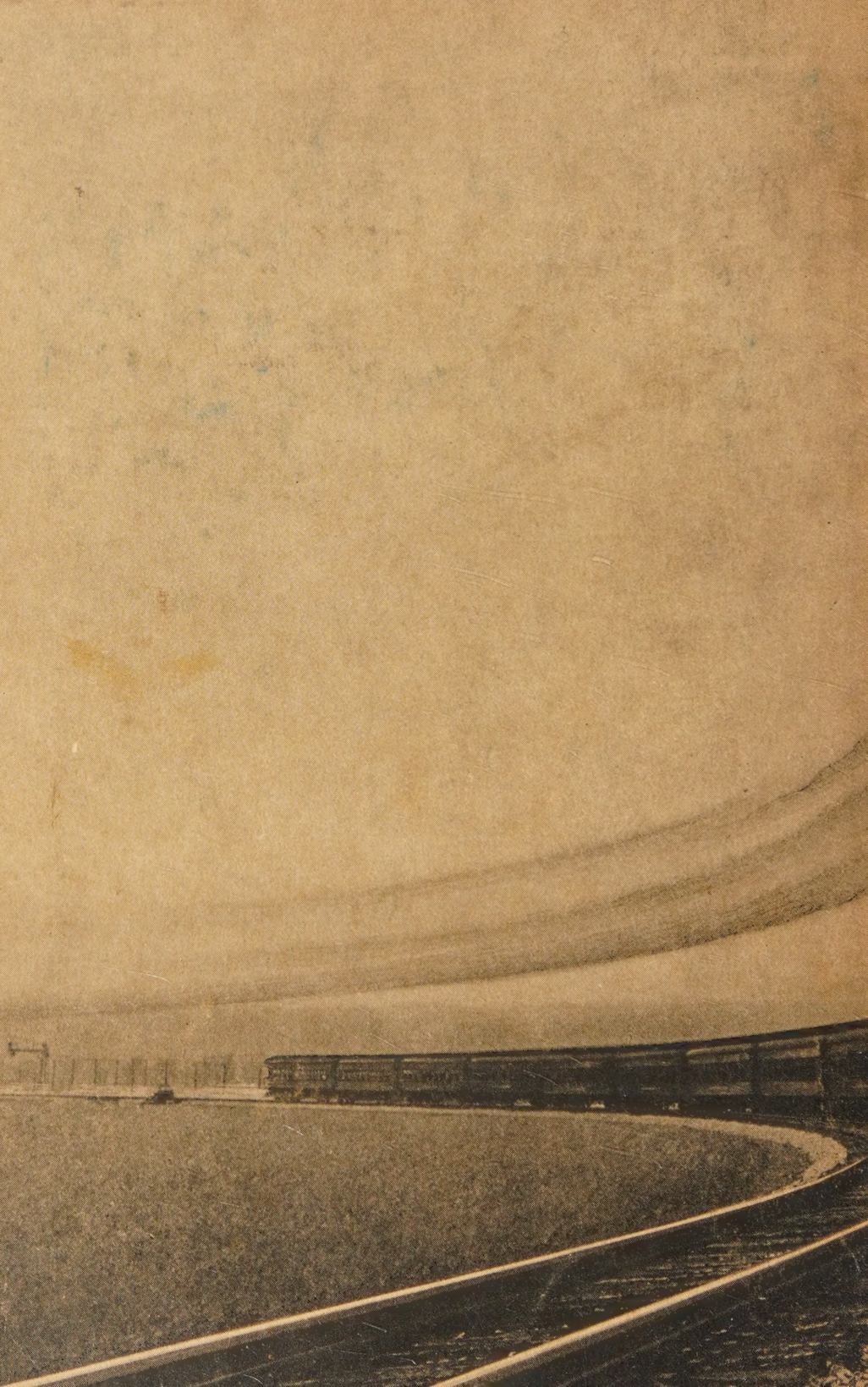
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Hotel Bismarck
NORTH
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CITY HALL & COUNTY BUILDING
Hotel Sherman
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I. C. SUBURBAN STA.
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